

# Surgeon in Nepal



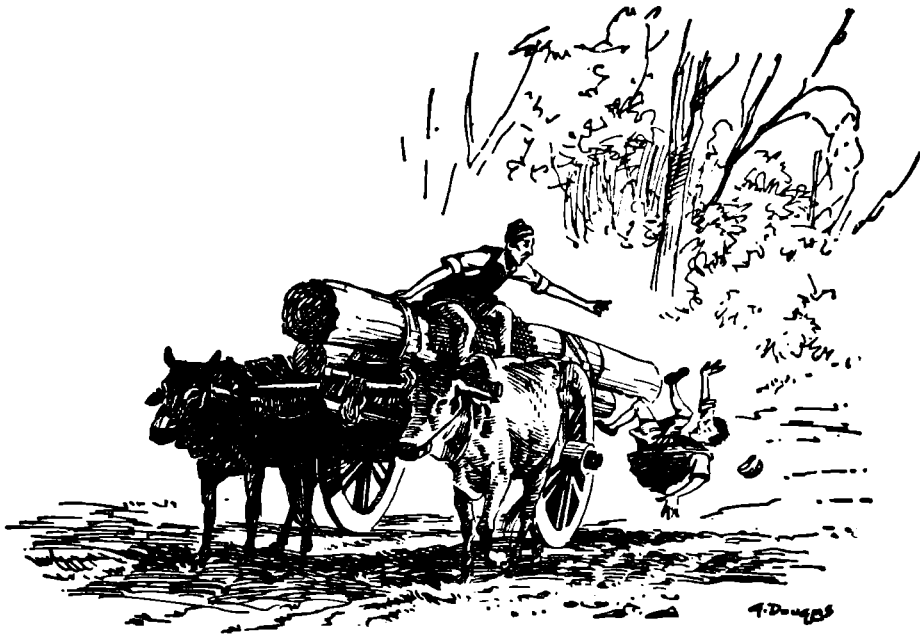
# Peter Pitt

TRANSATLANTIC  
ARTS



# *Surgeon in Nepal*

PETER PITT



JOHN MURRAY

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# Contents

## PART I: BACKGROUND

1	The Hospital	3
2	Nepal	10
3	Rakshi, the Nepalese Alcohol	14
4	The Kukri	20
5	Witch Doctors	30
6	Smoking	42
7	Dashera, the Animal Slaughter	45

## PART II: ANIMAL SECTION

8	Bhalu the Bear	51
9	Bhalu and the Police	59
10	Bhag the Tiger	64
11	Chituwa the Leopard	69
12	Snakes	72
13	The Green Parakeet	88

## PART III: MEDICAL SECTION

14	Cholera	93
15	Gas Gangrene	100
16	Rabies	105
17	Osteomyelitis	121
18	Goitre	130

## PART IV: VIOLENCE AND ACCIDENTS

19	Robbers and Murderers	139
20	Blood	146
21	River Crossing	155

## *Contents*

22	Mustard and Stress	162
23	The Asari Thorn	167
24	Doctor Sahib the Dentist	171
PART V: MAINLY FOR WOMEN		
25	'In sorrow, thou shalt bring forth children'	181
26	Faith—and Finale	207
	EPILOGUE	213
	GLOSSARY	214
	HOSPITAL STAFF	224
	DISTANCES	225

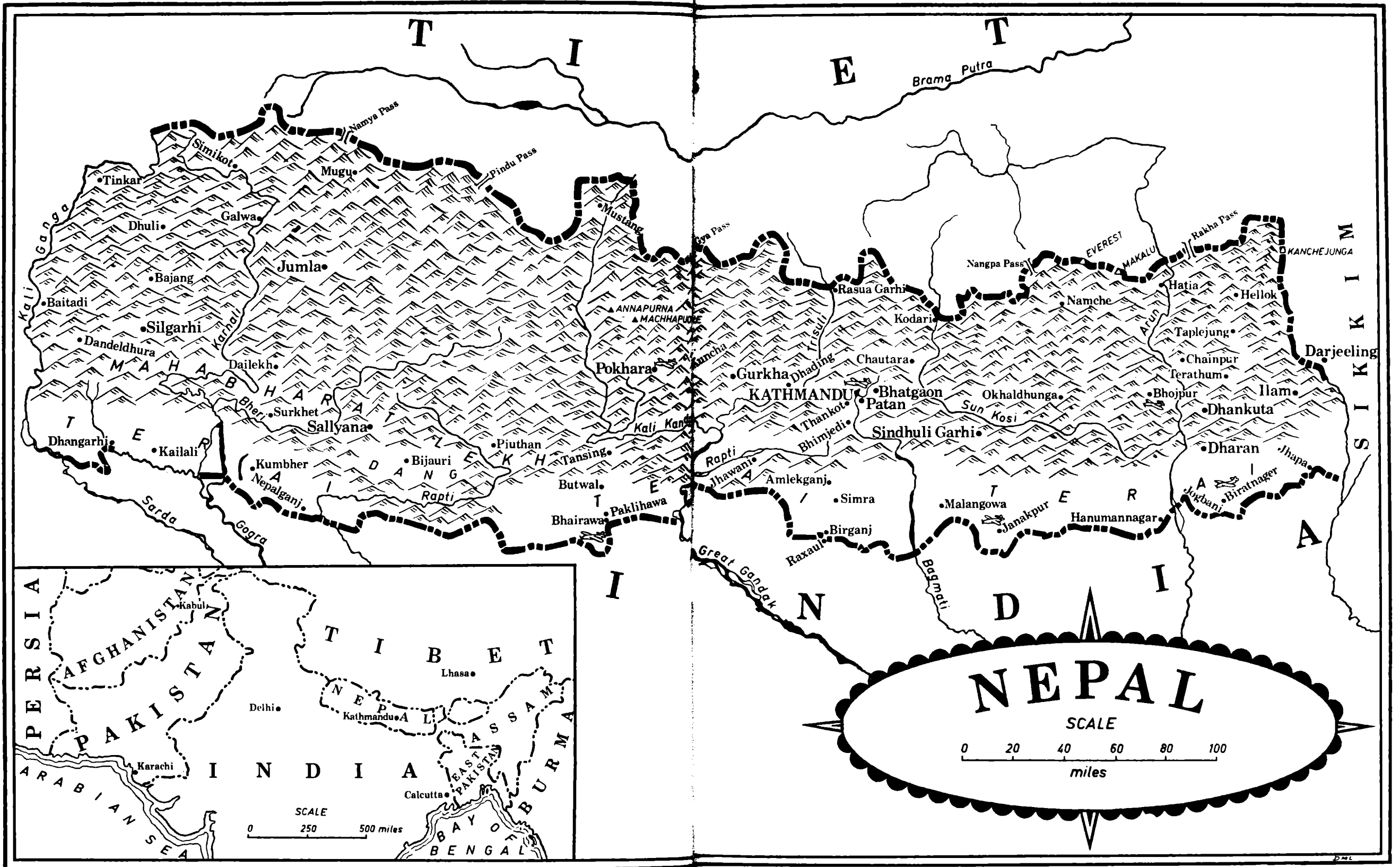
## Author's Note

I have written this book because the medical problems I have had to deal with in Nepal are so very different from those at home. I have found them so fascinating that I hope my readers will share some of my interest.

I do not pretend to be a brilliant surgeon, only a hard-working one. I do not claim that my management of the medical problems in this book is necessarily correct—but only what I believe to be right in my own hands.

I do not claim to be an authority on Nepal, the Gurkhas, their customs or religions, for I have lived only two years in the country and those two years were spent in the British Military Hospital, a little oasis of England, in Eastern Nepal. Every word I have written is what I have seen or been told by my Nepalese friends, in the good faith that they were true or what they themselves sincerely believed to be true.

Finally, I would like to thank George Douglas for the many months of work he put in to illustrate the book. Mr Douglas, who lives in Darjeeling, seventy miles east of Dharan, insisted on absolute authenticity and thus his drawings provide the background details which I have found impossible to describe in a book of this length.







FOR THE BRITISH TAXPAYER part of whose burden has paid for the little British Military Hospital built in the shadow of the Himalayas, and who has thereby created much gratitude and goodwill to the name of Great Britain in Nepal—and more important—has saved countless lives.



PART ONE

Background





## The Hospital

I had never seen such terrible burns. Not one square inch of six-year-old Dilbahadur's skin had escaped. At least eighty per cent of the skin of his little three-year-old brother, Phulbahadur, was similarly blackened. The little children, practically moribund on arrival at the hospital, were past screaming, simply whimpering, *pani, pani*, (water, water). I gave them this their last wish before drugging them, so that they would no longer have to suffer the terrible pain.

Within seconds of seeing them I had taken them to the theatre, while a nurse frantically telephoned Vincent, my anaesthetist. My scalpel slid through the charred flesh of Dilbahadur's groin to expose the end of the longest vein in the body. Through this vein I planned to give the little boy an emergency blood transfusion, with group 'O' negative blood, the type that is safe to give nearly everyone. This blood was their only hope, though I knew it was only a futile attempt to save their lives. As all this skin had been so badly burnt, the surface blood vessels had likewise been destroyed. I had to dissect out a deep vein to give this transfusion. The odds were insurmountable. A few seconds later Dilbahadur's body convulsed. He was dead. I immediately placed my hands upon his breast bone, thrusting rapidly down upon his chest, trying to jerk his heart back to life. Vincent passed an anaesthetic tube through Dilbahadur's little wind-pipe and pumped in oxygen under pressure. It was all to no avail, the heart would not beat again.

We now turned all our attention to Phulbahadur but with the same result.

The tragedy of these two boys was typical of how the Nepalese suffer in Nepal, where medical aid, in the more remote regions, is non-existent and, even where it is available, it may take days of trekking across the mountains to reach such help.



## Background



These two little boys were playing near the open wood fire that had been glowing in the middle of their wattle and daub dwelling, while their parents had been cutting down trees to prepare huge loads of wood, ready to carry to Dharan bazaar. Each 100 lb. load would be sold for a rupee—a mere shilling. It was back-breaking work for so poor a return. Suddenly, from the distance, their father had spotted that the house was ablaze. They had raced back, but by the time they had reached the home and dragged the little boys clear of the flames, the children had been burnt almost beyond recognition.

The distraught father rushed around to collect neighbours and relatives, while the mother wrapped her children in large cool banana leaves. The boys were soon placed in a *doli*, a sack hammock slung on a large bamboo pole. The party had then run, in relays, for four hours to reach the hospital. They needn't have bothered, for no one I have ever treated, with more than seventy per cent of their skin burnt, has survived.

They did have other children, but how utterly sick they must have felt to know that never again would they be woken up by the chatter of these two little boys. The sad fact remains that similar accidents keep occurring all over Nepal.

## *The Hospital*

The parents had lost practically everything. All that remained was forty pounds of rice that had been kept in a tiny outhouse. Ranjit, the Administrative Officer at the hospital, gave the father some money out of the 'Villagers' Fund' (kept for such emergencies) to help towards the cost of building another home and to protect him from the wealthy money-lenders with their criminal rates of interest at ten per cent per month. Once the Nepalese villagers get into debt, it is almost impossible for them or their families ever to be free again.

This was the country to which I had brought my wife Anna and James, my three-months-old baby, some weeks earlier, to take up the post as surgeon to the 'Seventy bed' British Military Hospital (B.M.H.). The people of Eastern Nepal have nicknamed the B.M.H. the 'Malayan' hospital, for this is the usual destination of the Gurkha soldiers and so many of the families.

Before my arrival in Nepal, I had, I thought, a clear picture of the B.M.H., but this was entirely different from what I was to find. I had pictured a collection of buildings on some ploughed field, I was considerably relieved by what I found.

In April 1966, we had flown in an old Dakota some 500 miles north from the baking heat and squalor of Calcutta to a simple grass air strip at Biratnager, on the Indo-Nepalese border. From there we were taken farther north by Land-Rover along the only all-weather road in this part of Nepal. This one-lane macadam road had been built from the border with India to the British base and the town of Dharan by the Royal Engineers so that the cross-country journey, that once took over twenty-four hours on horseback, now took but an hour by road.

For twenty miles we were driven through what was virtually an extension of Bihar state of India, through scattered villages and dried up fields until we reached the jungle. For ten miles we passed through tall trees with massive creepers draping the branches. We disturbed groups of monkeys who ambled into the undergrowth at our approach. Finally, we passed under an arch where the road forked. Soon we were at the cantonment. This camp had been built at 1,000 feet above sea level, five miles from the foothills

## Background

of the Himalayas, which were so close that we either had to drive back some fifteen miles south or drive north another five miles and climb to about 5,000 feet to view Mount Everest and the whole panorama of the snow-capped Himalayas.

The other part of the road ended in Dharan, a town of some 40,000—situated about a mile from the cantonment and so named because wood cutting used to be the main industry before the establishment of the cantonment. Then the jungle extended right up to the foothills and the *dharan* was the frame used by two men for sawing planks. Now it is the cantonment that is the *raison d'être* for the size of the population of Dharan.

The cantonment had to be a numerous collection of bungalows as Nepal is a potential earthquake area. On either side of the well-kept roads lay four-foot-deep monsoon drains and behind these had been planted flame trees. Their orange blossom and the flowering shrubs, which bloomed exotically, contrasted strangely with the parched earth and burnt brown grass. There was a row of jacaranda trees below the hospital, their haze of blue blending beautifully with the brilliance of the flame trees.

Then we drove to our bungalow, where crimson bougainvillea cascaded over the pillared porch. Our three-bedroomed home stood in half an acre of garden, where a few tomatoes, lettuces and cauliflowers had still survived the heat and dryness thanks to the vigilance of the *mali* (gardener).

The building of the camp started in 1958 and the cantonment is now really like a small town. There are three schools for the Nepalese children, a church which is shared by the British school children, a temple, a sewage farm, a store where N.A.A.F.I. goods are sold, and a whole collection of little shops. These include a draper's where the walls are lined with all manner of vivid Indian cottons, a tailor's where the men strain their eyes in the gloom as they bend over their ancient treadle sewing machines, while a transistor radio blasts forth monotonous, screeching Indian music. There is a goldsmith's where the craftsmen are doubled over their precious metals as they sit cross-legged on the ground, hammering out delicate jewellery with little metal mallets. Next door the *kukri* makers toil, though mostly in the cool of the evening, work-

## *The Hospital*

ing the bellows with their bare feet and expertly manufacturing these short, strong swords.



The cantonment was built as a recruiting depot for Gurkha soldiers joining the British army. It is used for paying the pensioners and resettling the Gurkha soldiers to life in the hills on completion of their service in the army. Of the 1,000 odd Nepalese civilians employed in the cantonment, a large number work in the R.E.M.E. workshops, and for the Royal Engineers. The European population, including the children, is about sixty and, as there was no adequate medical aid within hundreds of miles, the B.M.H. had to be built to safeguard the health of the British and the Gurkha soldiers and their families.

In 1960, the B.M.H. was opened and it consists of a medical and a surgical male ward, termed Gurkha Other Rank (G.O.R.) wards, two tuberculosis wards, one for the open infectious cases, the other for the non-infectious, a family ward for women and children, a tiny obstetric unit and an officers' ward. The wards were light and well ventilated, so that the breezes could blow through

## *Background*

them in the hot weather. There were huge fans hanging from the ceilings. In the winter, the wards were warm and comfortable with central heating. In addition to these wards, there were some air-conditioned side wards for the European patients. Most of the out-patients and all the emergencies were seen in the reception block. Finally, there was a well-equipped air-conditioned theatre.

This hospital was staffed by three British doctors, four Queen Alexandra's Royal Army Nursing Corps (Q.A.R.A.N.C.) sisters, and Nepalese nurses and orderlies.

My greatest help in the reception, during my two years in Nepal, came from a mere wisp of a girl, Hemlata. Literally her name means 'Himalayan branches', the snow-capped peaks of those great mountains where, in both Nepalese and Indian mythology, the gods and goddesses abide.

Hemlata, though never even trained in nursing, had those great gifts of compassion, dedication and common sense which make the perfect nurse. She was so interested in her patients that she spent many hours interrogating them for me, frequently following up their progress by questioning other patients who might have come from the same district. Ironically, it was Hemlata who became my chief interpreter, yet she was not even Nepalese, having been born in a little Tibetan village. With Hemlata's help, I slowly picked up a smattering of Nepalese, just sufficient to hold a routine sick parade. Hemlata was never well: weighing a mere 85 lb., she suffered from chronic anaemia so that her haemoglobin rarely rose above 50 per cent, half what it should be. In addition she had suffered from tuberculosis in the not too distant past.

Soon after the monsoon broke, during my second year in Nepal, a serious epidemic of typhoid fever spread through the eastern region of the country, as infected excreta was washed into the sources of drinking water by the rains. Finally, after five exhausting months fighting the epidemic, during which time 397 suspected cases were seen at the B.M.H., and once I was certain that the epidemic was definitely on the wane, I took my annual leave. Almost the day we left the cantonment, Hemlata, who had helped save so many of these patients, herself fell ill. Soon her condition was desperate. In her semi-comatose condition she kept plucking



## *The Hospital*

at the bedclothes muttering, 'Major Pitt, Major Pitt, please save me.' I was hundreds of miles away in Kashmir. The Chloramphenicol, which my colleagues had prescribed for her, plus the devoted care of her aunt, kept her alive. On my return, I was immediately told of her condition. As she lay on her bed in the village, she looked little more than skin and bones. Her eyes brightened when she saw me. She whispered: 'Now I know I am going to get better.'

Until that moment, I had not fully realised just how much I relied on this young girl, or how much her absence would have meant to the patients at the B.M.H. A few weeks later she was back at work. Soon after she married and even when she was pregnant she carried on working till very nearly the last possible moment and then she was back again just a few weeks after young Robbie was born.

As my prime role at the hospital was to deal with any misfortune that might befall the military personnel and as these few were rarely ill, I was able to devote the majority of my time to those who needed my help most. These were the villagers of Eastern Nepal, but soon I was approached by both the Nepalese army and their police also to be their surgeon. Finally, patients were sent to the B.M.H. from any part of Nepal, and even high-ranking government officials sought our aid. I had a role that was quite unique in the British Army.

# Nepal

Nepal, though a pawn in the political game between East and West, North and South, is still an independent sovereign country, ruled by His Majesty King Mahendra Bir Bikram Shah Deva, Maharajadhiraja of Nepal.

King Mahendra is a very wise man, all powerful, yet he has the good of his country very much at heart, so much so that the strain of governing in such times of deep tension caused him to suffer a heart attack in 1968, from which he fortunately recovered.

Only in the past nineteen years has the country been opened to the outside world, yet most of the visitors have only been to the isolated capital of Kathmandu, a fascinating city, a mixture of the middle ages and the twentieth century, yet not typical of the rest of Nepal.

Nepal extends some five hundred and twenty miles from east to west, yet is only from eighty-nine to one hundred and fifty miles from north to south. The area is some fifty-four thousand, six hundred and sixty-two square miles. This landlocked country lies on the north-east frontier of India; India also extends to cover the east and west frontiers. Tibet occupies the northerly frontier; Tibet in name only, for it is Red China in reality. So Nepal lies as a buffer state between the two powers.

Nepal shows an extraordinary contrast of climate and geography, extending from the plains in the south with their tropical heat to the Himalayan peaks in the north with their arctic conditions. The ground in the south is flat, as far as the eye can see, for it is in fact an extension of the northern plains of India. This region is called the *terai*, and it is in the northerly parts of this terai that the dense jungle is situated. This is the jungle where tiger prowls, where panther and leopard abound, where herds of wild elephants still roam and where the rare rhinoceros is sought

## *Nepal*

by poachers for its one horn with its alleged aphrodisiac properties. It is a forest full of beauty, yet full of danger, especially in the wet season when the hamadryad, the king cobra, the most deadly snake in the world, may lurk.

The terai was once populated by only the Tharu tribe. They alone could withstand what was once the most killing disease in the world, malaria. It was because of the mosquito that the terai of Nepal was once one of the most dangerous places in the world to live. Over the years, the Tharus have built up such a resistance to the disease that they could survive and cultivate these wonderfully fertile plains. But even the Tharus were affected by the disease; only the strong survived and even they showed the hallmarks of malaria, huge spleens and severe anaemia.

The Tharus are a most interesting people. Although a deeply pigmented and heavily tattooed tribe, they are a very handsome race, with bold, clean features and an aristocratic bearing, partly due to the way they carry their loads on their heads, like the African. Only the women suffer the extensive tattooing which is performed around puberty. Both arms and most of the chest are tattooed. They believe, quite naturally, that they can take nothing with them when they depart this life, and so they spend their money on this extensive tattooing, so that at least is buried with them. The women believe that the more tattooed they are, the more beautiful they are, and they certainly cannot get married until they have been through this ritual. The dress of the Tharu women is most becoming, especially on the young girls, who have beautiful figures. They wear a white sari over one shoulder so that it simply hangs down their front, just covering the front of the breasts and nipples; from the side they look more than elegant.

The Tharus are the most primitive of the Nepalese tribes. They are the most deeply steeped in fear of witches, wizards, witch doctors and gods. They only visited the B.M.H. when really desperate, when all else, including sacrifices to the gods and all the skills and magic of the witch doctors had been tried and had failed, but then alas, all too often, they came too late.

Due to the efforts of the World Health Organization, malaria has been practically wiped out from Nepal. The plains are safe to

## *Background*

everyone, with the result that many Gurkhas have come down from the hills and settled in the terai; Indians have come north and it has been safe to build the cantonment there.

Among the tribes that live near the cantonment are the Bahuns and Chettris. These people are Hindus and of Indian descent. They are quite unlike the hill tribes, being better educated and more intelligent. In contrast to the hill people they were far more neurotic and used to attend the B.M.H. with many trivial complaints. Due to their superior education, they held the better jobs and were much richer than their more simple brothers from the hills. The Bahuns were never recruited into the British or Indian armies, though both tribes hold posts in the Nepalese army.

Typical of the Bahuns was the woman who supplied the B.M.H. with buffalo milk from her herd, the only fresh milk available. The milk she supplied became suspiciously thin.

Around this time, Anna and I had become tired and bored with the powdered milk and, alone amongst the European families, received a daily delivery of rather dirty buffalo milk, which the little milk boy carried some miles each day in a churn and poured into a large saucepan which we then weighed—as the Nepalese sell milk in pounds, not pints; we then boiled the milk. Now I had already saved the woman's life when she had been brought to the B.M.H. having nearly exsanguinated with an abortion and I had attended her on numerous occasions with many other complaints, while finally delivering her of a fine little boy. The milk became ludicrously thin. I tested the fat content in the laboratory every day and estimated that she was diluting the milk down four-fold. I paid her, therefore, according to this fat content. The milk supplies immediately ceased altogether and we were back on our tins.

From the terai of Dharan, the foothills of the Himalayas rise. The so-called foothills are themselves mountains which undulate slowly up until they reach their climax in such great peaks as Mount Everest, Kanchejunga, Makalu, Annapurna and Machhapuchhare (the fish tail mountain).

The most important part of Nepal, as far as Great Britain is concerned, is called Midland Hills, roughly 1,500 to 5,000 feet

## *Nepal*

high, ranging between the foothills and the snow-capped peaks. Here, the valley of Kathmandu (4,500 feet) and Pokhara (2,000) are the best known areas. It is in this part of Nepal that some 70 per cent of the total population live, over a quarter of a million of the ten million in Nepal living in the Kathmandu valley. It is in these hills, though outside the valley, that the *gallawallahs* (recruiters) seek young men from the tribes of the Rais, Gurungs, Magars, Limbus, Sunwars, Tamangs and Puns for the British army. These tribes produce natural fighters. Over the centuries they have fought between themselves to exist. Their long days are spent in heavy toil in fields cut from the side of the mountains. Their beliefs are simple. Their justice is harsh.

These are the tribes that provide the Gurkhas that have served the British army so well.

Originally the valley of Kathmandu was inhabited by the Newars who, with their skills with wood, brass and gold have made the temples of Kathmandu almost unique throughout the world. The word Nepal is derived from Newar.

The word 'Gurkha' is actually derived from the small state of Gurkha which lies roughly in the middle of Nepal. By 1769 Prithwi Narayan, their prince and leader, had not only defeated all the neighbouring tribes but had also conquered the Newars of Kathmandu. The present king is the direct descendant.

Prithwi Narayan's army was mostly recruited from the local tribes of the Gurungs and Magars. All Nepalese recruited into the British army came to be known collectively as Gurkhas.

These central tribes could not provide sufficient troops for the British army, so recruits had to be sought from other tribes including, in the east the Rais and Limbus who are generally rather bigger and more mongolian in appearance than the central tribes, and from the far west of the country, the Puns.



## Rakshi, the Nepalese Alcohol

The Nepalese hill people have to work long hard hours to survive in their harsh country. They have few pleasures apart from taking *rakshi*. This appears to be an almost universal vice throughout the whole country. Rakshi is simply a home-made wine. Though usually made from *kodo* (millet) it can also be distilled from rice, oranges, berries, bananas and maize. Like all home-made wines, it can either be very strong or fairly weak. Rakshi is also prepared in government distilleries, when it is sold for about fifteen shillings a bottle. The wine tastes vaguely like rum. I hardly ever drank it myself, except at Gurkha parties, when I found it wise to make a long drink of it with orange squash. With this precaution the glass lasted much longer and the rakshi was really quite palatable. Many Nepalese are such heavy drinkers that rakshi results in a great deal of ill health and early death in the hills. I will first tell of its one beneficial effect before recounting its sad dangers.

Nature is a wonderful physician. Bahadur, who had once been a rifleman, fighting the bandits in Malaya, had set off from his home, around Christmas time, to walk to Dharan to collect his pension. He was accompanied by his friends. Several years earlier, while on active service in the jungle of Malaya, he had been shot three times through the leg. This had resulted in a permanent weakness of this particular limb.

Soon after passing through a village on his way down to the camp, he tripped, due to his weakened leg, fell off the narrow winding path and crashed some sixty feet down the precipitous side of the mountain. His friends climbed carefully down to him and pulled him back to the path. He was in agony and he couldn't stand as he had broken the neck of his thigh-bone. His colleagues hurried back to the village that they had just passed through, and borrowed a long, strong bamboo pole. On this they slung a

## *Rakshi, the Nepalese Alcohol*

hammock, constructing a *doli*. He was carried on this *doli* the two days' journey back to his home. Four different porters bore the load for the remarkably small sum of two rupees per day for each porter. Sixteen rupees in all, a mere fifteen shillings.

Bahadur's wife supported his broken thigh with splints, while liberally dispensing the favourite alcoholic beverage of the hills, *rakshi*. This was brewed from rice.

For two long months he suffered severe pain whenever he moved but by the time a further month had elapsed, his pain had sufficiently abated for him to be carried down in a basket to Dharan to collect his pension and to visit the B.M.H. at the same time. An X-ray showed that he had fractured his bone through the strong trochanteric region of the hip-bone. This part of the bone is easily felt on the outside of the thigh at the level of the bottom of the trouser pocket. A break in this site always heals well, whatever treatment is adopted. He was a very lucky man. True, he had an inch and a half of shortening in his leg but otherwise the bone had healed well in a good enough position.

I gave him crutches and some aspirin to try to wean him off the *rakshi*, for with the crutches he could walk without much pain and with the aspirin there was no need for the *rakshi*. Eight weeks later he was able to return the crutches. He could walk on his own with only a limp.

He told me he had an excellent wife. She had nursed him back to health, while at the same time looking after their children, aged seven, four and one. Indeed, I think she must have been wonderful!

Alcohol is a poison. In modest amounts, it has a very pleasing effect and the liver can tolerate it and break it down, thus slowly lowering the blood alcohol level. But the liver needs carbohydrate, protein, fat and vitamins for its nourishment. With chronic alcoholics, the stomach becomes so inflamed that these people completely lose their appetite, and with it even the will to eat. Food makes them feel sick and so they become even more dependent on the alcohol. The more they drink, the less they want to eat. Alcohol, being full of calories, provides sufficient carbohydrate, but precious little else. The liver cells are soon damaged by the excess of alcohol and as there is no intake of protein and vitamins,

## *Background*

the cells cannot recover. The liver thus becomes permanently damaged.

Bhagiman waddled into the consulting-room one morning, ironically enough, in the middle of my ante-natal clinic. His abdomen was more distended than that of any woman I had so far seen that morning, and three of these patients were heavy with twins.

He had travelled five days to get to the B.M.H., from the little village of Damak. After four weary days on the journey, he had finally hired a horse and had been led to the B.M.H. He told us that he had been ill for only four weeks, although it was obvious that he must have been ill for considerably longer. His legs looked more like tree trunks than legs, being grossly swollen. Although his abdomen was so large, the flesh had literally fallen away from the rest of his body. I invited my medical colleague to look after him. Bhagiman flatly denied ever being a heavy drinker and this denial put the doctor entirely off the track of the correct diagnosis. He suspected diseases like worms, cancer, tuberculosis and a disease which can cause enormous enlargement of the liver and spleen called kala-azar, yet all the investigations proved negative. In desperation he drained off the fluid but it simply reformed.

Finally, I was asked to see him again, to look inside his abdomen to establish the diagnosis. I found three important physical signs, apart from the free fluid in his abdomen: his spleen was markedly enlarged, his finger-tips were swollen like little drum-sticks, his palms had red patches on them on the soft flesh below the thumbs and little fingers. It was not until five minutes before the anaesthetist was due to give the sleep-inducing injection, pentothal, that Bhagiman confessed that he had drunk at least ten ounces (quantities of fluid are described in weights, not fluid ounces, in Nepal) of rakshi every day of his life, since he was only twelve years old. He was now thirty-seven. He had therefore been a heavy drinker for the past twenty-five years; his liver could finally take no more.

I had promised him an operation and as he had such faith in me I felt I just had to proceed with it, although I knew I could do little good. I made only a tiny incision, just big enough for me to get my hand inside his abdomen. I slowly allowed the ascitic fluid

## *Rakshi, the Nepalese Alcohol*

to pour out of him; gallons and gallons of straw-coloured fluid escaped. It was only then that I could feel around; his liver was hard and roughened from gross cirrhosis and his spleen, as I already knew, was large, another hallmark of the disease. Now that I had removed all the fluid, there was nothing else for me to do. I closed up the tiny hole as quickly as I could for even this incision had caused troublesome bleeding; his liver was not even producing enough substances to assist in the adequate clotting of blood. It was possible that he would not recover from the operation because, when a lot of fluid is suddenly released from the abdomen, death commonly occurs. But Bhagiman had such faith in my operation that he knew he would get better, so he started to eat. The much needed protein and vitamins were eagerly taken up by his starving body, his wound healed well, the fluid did not return and he was able to go back to his village, a much fitter man. He promised me faithfully that he would never drink again. I hope and pray for his sake that he kept his word for, if he never drank any more rakshi, he would certainly live, otherwise he would surely die.

Ganeshbahadur suffered from the ill effects of rakshi in much the same way as heavy port drinkers used to in England. He was one of the most serious cases of gout I have ever seen. Four years earlier, at the age of twenty-nine, gout had developed in his big toe; this is the most common site for the disease. The unfortunate victim of gout is often portrayed by cartoonists, lying in an armchair, with a huge bandage around his foot, which is supported on a pouffe. He is invariably sipping a glass of wine, while sporting a red face with an even redder nose.

Ganeshbahadur had made his own rakshi from rice and had consumed half a pint of this home-made brew every day of his life since he was a very young man. As the pain had grown worse in his gouty toe, so he had drunk more rakshi, in an attempt to nullify the constant ache. In desperation he also sacrificed first a brown and white goat and then eight hens to the gods, all through a scheming witch doctor. Alas, his condition did not improve. He left his wife, his five-year-old son and year-old daughter at home and travelled sixteen miles on foot to the B.M.H. It took him a

## *Background*

long time to complete the journey as every step had been agony.

For three years he had attended the B.M.H., yet during that time the gout had slowly worsened. The swelling in gout is due to the deposit of crystals of uric acid. Ganeshbahadur's blood level of 9.7 mg was way above the upper limits of normal for uric acid, 6.00 mg per 100 ml of blood.

Eventually infection entered in, as the chalky gout finally burst out through the skin of his toe. Ganeshbahadur was in agony. The physician asked me if I would remove the gouty part of his foot to ease his suffering. This I did, but there was so much infection in the bone, and so much gout about, that I was amazed how well his foot healed up. Soon he was free of pain for the first time in over four years. He was a very, very grateful patient, yet the operation had taken me a mere ten minutes.

When I later saw Ganeshbahadur in my out-patients' clinic, he told me that he was particularly thrilled, for now he could wear shoes for the first time in ten years.

I was never able to cure him completely, for gout is a generalised disease, not unlike rheumatoid arthritis, which is, of course, so common in England.

There is a particularly cold and unpleasant fortnight in the middle of winter in Nepal. This occurs soon after Christmas, when cold mists descend over the land. This was when poor Ganeshbahadur was most miserable for the cold seemed to get right inside his bones. It is a most miserable experience, which any of my readers who are so unfortunate as to suffer from arthritis will recognise. It is, however, a phenomenon that no one fully understands. On a combination of Benemid, colchicine and aspirin, I was able to keep his gout in check. Certainly when I left Nepal, Ganeshbahadur was a very much happier man than he was when I had first arrived.

Yet another affliction, due entirely to the rakshi, was demonstrated by Ramchandra. He was a Gurkha officer who was being medically boarded out of the Army as he had become an alcoholic.

He had been sent to Dharan for his last few weeks in the Army, to attend a resettlement course. After only a few days, he had to be admitted to the B.M.H. as he kept coming up to the

## *Rakshi, the Nepalese Alcohol*

reception complaining of pain, following a fall, when he was under the influence of rakshi. In fact, he simply had a bruised hip which was not at all serious. On the third day following his admission, his behaviour became most odd. First, he frightened to death another poor Gurkha officer, whose hernia I had just repaired. That same afternoon he kicked open the ward door and burst in like a madman, gnashing his teeth. We tried to settle him down in the main ward, in order to keep an eye on him, yet, when next I arrived, the nurses told me how Ramchandra had locked himself in the linen-room and would not open the door to anyone. He did in fact come out for me. I led him back to his bed. Three times that night he changed his bed, alternating each move with locking himself up in the linen-room. He finally left the side-ward, much to the relief of the other officer, and slept in the bed I had originally given him in the main ward. By the next morning, he had moved to a different side-ward, this time on his own.

His activities had caused considerable anxiety to the night staff, but these worries could have been nothing compared with the terrifying night that the officer himself had suffered. He had imagined that he had seen men, armed to the teeth with kukris, just outside the windows. They were all coming in to attack him. He was defenceless in his pyjamas. These delusions were a variant of the pink elephant theme, so well known. They were, however, frightening to watch, being due entirely to the sudden withdrawal of alcohol, from a man completely dependent on that drug. Alcohol is a drug as well as a poison.

The treatment was simple—a large stiff dose of the drug called rakshi! He returned contentedly to the course he was attending. This was, worryingly, a *panchayat* course, for this meant that he would return to his village as one of the advisers and rulers, and here he was, an inveterate alcoholic.

## CHAPTER 4

# The Kukri

Alcohol was responsible for some terrifying injuries whenever a great deal of rakshi was consumed as at the frequent festivities. Then, the soldiers might well become a little too amorous with someone else's wife, especially as many of the Gurkha soldiers had a superiority complex about themselves.

One such soldier was found unconscious by the 100 foot high water-tower in the cantonment, with two deep wounds on his head. When roused, the Nepalese will try to behead their enemies, they do not bother with simple grievous bodily harm! This particular soldier had been fortunate enough to get his jaw in the way of a slash at his neck. He escaped with his life at the cost of a savage slash out of his chin. His assailant had then attempted to cleave his head in two, but the soldier somehow managed to turn his neck in the nick of time and the blow fell sideways across his forehead, splitting the skull though not actually penetrating into the brain. As the soldier finally hit the ground, he also split open the back of his head on the hard-baked earth. He was carried to the B.M.H. unconscious from alcohol, the force of the kukri blows and loss of blood.

In the hills, these fights are much more common, especially during the festivities of Dashera and Dewali. Dewali is perhaps the most dangerous period for, during the three days of the festival, gambling is permitted, fortunately for the only time of the year. In an alcoholic haze, a gambler may lose all his wealth and belongings and, as a result, go berserk with his kukri.

Murders frequently occur in the hills, yet often the murderer escapes. If he is caught, he may be bound up with a kind of grass, as is used for tourniquets for snake bites. Even wire may be used and a man may well die due to this method of constriction. He

## *The Kukri*

will, of course, try to escape from the village and should he cross the border into India, he will be perfectly safe.

After Mount Everest and the Gurkha soldier, the kukri, the Nepalese national weapon, is surely the most well-known fact about Nepal. This fearsome, world-renowned weapon plays a vital role in the life of the Gurkha in peace and war. It is, in fact, a short heavy knife with a curved blade of various lengths. The soldier's kukri has a blade some twenty inches long which he wears in a scabbard on his uniform belt.

Every hillman carries a sheathed kukri and it always reminded me of the cowboys in the wild west films. You never saw a cowboy without a gun and you never saw a hillman without his kukri. He wears his knife tucked in his cummerbund or *patuka*. The knife lies in front of his stomach, unlike the classical position adopted for the sword in Great Britain.

The cantonment kukri-makers were the most envied in Nepal because they could use the old springs of discarded vehicles. These produced, I am told, the best steel available in Nepal.

The kukri is not just one knife but three. As well as the main blade, there is a short little knife called the *karda*, which serves as a penknife. The third blade is deliberately blunt. This is called the *chakmak* and is used to start fires. If rubbed on stone the spark produced will ignite the coarse Nepalese paper. Though this certainly works, the conditions are hardly ideal in the monsoon season. The introduction of matches into Nepal has practically replaced the necessity for the *chakmak* except, perhaps, in the most remote regions of the country.

The scabbard of the kukri consists of two pieces of wood, the same shape as the blade, bound together by leather. There are two miniature scabbards for the *karda* and the *chakmak* just behind the main sheath. It is important not to hold the scabbard with one's fingers round the front, while the knife is unsheathed, as the blade may be very sharp and, as it is drawn, it might slice through the scabbard taking off some fingers at the same time!

There is a tiny projection on the blade near the handle. The Nepalese believe that once they have drawn their kukris in anger, as at war, the knives may not be sheathed until blood has been



## Background

spilt. At one time this had to be alien blood and if they failed to wound or kill their adversary, they would at least have to slaughter a hen or duck instead. This belief has now been modified, perhaps because of the rising cost of poultry! This is where the little projection comes in. All they need to do is to prick their own thumbs to spill the drop of blood. Then the kukri can be honourably sheathed.

Adjacent to the pointed projection is a tiny moon-shaped area that has been cut out of the blade. This is to minimise the possibility of blood pouring down over the actual grip, so that the handle is not slippery from sticky warm blood.

The kukri plays an integral part in the life of the Gurkha from birth to death. It is with the karda that the umbilical cord is severed following the birth of the baby. This karda is then placed under the head end of the baby's cot or *kokro*, where its presence is thought to frighten away the wizards and witches.

The Tharu tribe believe in still further protection for their babies and place a net across the cot. They believe that, should a witch try to enter the cot to devour the child, she will be caught up in the net and be unable to escape. The witch, realising this, will then studiously avoid assaulting any child with a net over it. When the child reaches the toddler stage, he will require further protection from these witches and the most powerful defence is a tiger's tooth. Next most important is the wild boar's tusk. These are tied round the toddler's neck. The combination of both the tiger's tooth and boar's tusk around the same child's neck, as I once saw on one little girl's neck, would make a witch turn green and run a mile.

A much more elaborate doli than the hammock used to carry the two little burnt boys is used at marriage ceremonies. The bridegroom is conveyed to the bride's house in such a hammock by two or four bearers, depending on what he can afford. The richer bridegroom may well opt to ride by horseback instead. The marriage ceremony takes place in the bride's house.

Tremendous changes have occurred in the past nineteen years since Nepal has been opened up to the outside world. Among my patients only about half had had their marriages arranged. This

## The Kukri



custom, planned by the heads of the respective households, was commonest among the more Indian of the Nepalese tribes, the Hindu tribes of Bahuns and Chettris. Nineteen years ago practically every marriage would have been so arranged. I must add that, outwardly anyway, the women I met seemed just as happy with these arranged marriages as were their more discriminating sisters. Perhaps this was because they had never been disillusioned, if indeed they ever had any illusions.

At the actual ceremony, conducted by the priest or Brahmin, a circle of flour is drawn on the ground. Prayers and recitations from a holy book follow and the kukri is plunged into the middle of the circle and remains there until the ceremony is over. The priest next draws a red line down the girl's hair parting with a red dye called *sindur*, for all the world like lipstick. This act is the nearest equivalent to the putting on of the wedding ring at the Christian wedding. The tip of the kukri is now painted with the *sindur* and placed on the girl's hair parting. Under the kukri the two make their marriage vows.

When the seriousness of the ceremony is over, it is sometimes

## *Background*

the custom for the priest to put three little cowrie shells in a bowl in a hole in the ground. Both husband and wife now put their hands in the bowl and whoever grabs the first shell wins a promise from their spouse of a present. Should the wife be the first to draw the shell, she will be considered too clever to look after her home. If the husband finds the shell, that is a sign that the wife is too lazy!

Finally, the wife's clothes and jewellery are collected and she is borne along in the doli to her husband's home.

There is a tremendous amount of free love in the hills where adultery is also very common. This is especially so with the soldier's wives who become bored and frustrated when left for three or four years at a stretch by their husbands, who are serving in Malaya. All the tribes seem equally promiscuous.

The penalty for adultery, however, is very serious for both the erring man and woman. Local law permits the aggrieved husband to behead the adulterer with his kukri. However, there are various local rules that first have to be abided by. Let me hasten to add that though this form of justice is no longer legal, it is almost certainly still dispensed in the remoter regions of Nepal, where the long arm of the Kathmandu law cannot reach and, even if it does, it is ignored.

I have been told of three variations to this form of justice. In the first, the seducer, unarmed, is given twenty-five yards start from his would-be assassin. Then the chase begins and, should the wronged husband catch the man, he may either dispense grievous bodily harm or even behead him if he is able.

One lover was caught in a terrible predicament. As he fled in terror from the village, chased by the irate husband, he came face to face with a tiger that had just killed a buffalo. The poor man fled past the tiger knowing that if he turned back he would surely be executed by the husband. The tiger, however, furious at this sudden intrusion on his kill, leapt up and killed the man instantaneously. Next moment the avenger appeared on the scene, brandishing his kukri. The startled tiger was even more furious and a second later this man also lay dead.

Another local rule permits the guilty party a fifty-yard start but

## *The Kukri*

he has to be caught by sundown; if he survives till then he is a free man.

The final variety is still more dramatic but, at least, it is quickly over. The man guilty of adultery has a mere one-yard start. He must be caught and brought down in a hundred-yard dash, during which the husband is allowed one slash with the kukri when he can aim at any part of the seducer's body. Again, if the man escapes, he is free. Either way justice has been served and all live happily ever after, perhaps. I cannot help feeling that there is no place for adultery in Nepal if the men are not young, fit and very healthy.

Years ago the guilty woman had her nose cut off with the kukri so that all the world would know her guilt. Though this possibly still occurs, I never saw such a case in my two years in Nepal. The women were simply thrown out of the village, but this is a very serious occurrence, for a lonely woman will soon come to grief in the hills. In addition there is no village where she can go. So these unfortunate women make for the towns where they enter a brothel called appropriately a *randighar* ('har' means 'house') in order to survive. These women are called *randigs* and it is possible that the slang 'randy' could be the origin of this word for these unfortunate girls. Conversely, we may have derived 'randy' from them. Interestingly, any resulting offspring are happily accepted into society without prejudice.

The law, as it now stands, is that fines or imprisonment are the penalty for adultery. However, this leads to complications. Should the aggrieved person bring such a charge and the adulterer is thrown into prison, it is the responsibility of the wronged person to pay the cost of feeding the prisoner, who could well languish in gaol for up to five years. The cost of going to prison is 600 Nepalese rupees a year, so, as far as I know, no one has ever insisted on the prison sentence, especially as the wronged person is given the majority of the fine. Fines up to 2,500 rupees are possible, though in one pending court case, 15,000 rupees were being demanded. An erring woman must pay a fine of 100 rupees and be thrown into gaol for a week.

The prisons were in a filthy condition. The Biratnager gaol,

## *Background*

thirty miles south of Dharan on the border with India, had fallen to pieces and was more like a stable with dirt, excreta, bed-bugs and rats everywhere. Whenever Gurkha officers went to visit any unfortunate soldier prisoner, they took tins of DDT to try to make the place more habitable by exterminating some of the insect life.

One day, a woman who called herself Naumati Rai brought up a little bundle to the B.M.H. I opened the rags to find a tiny, dirty baby, too weak even to cry. Flies were swarming all over it and the rags were saturated with an offensive green watery stool. Its face was more like that of an old man than of a baby. The poor little thing was suffering from the combination of malnutrition, dehydration and severe dysentery. How the nursing staff managed to save that baby was a miracle. At the time the ward was run by a very dedicated Queen Alexandra's Royal Army Nursing Corps sister called Derri who, several times a day, passed tubes into the baby's stomach to feed it, the baby being far too weak even to suck. At first all the baby could tolerate was a weak salty fluid, until the antibiotics had time to kill the bacteria. With tremendous devotion to duty, Derri nursed the baby back to health and after only a few days the baby was eating and drinking everything it was offered; we just couldn't satisfy its hunger. Finally the day came when the child was so fit that we could not keep it in hospital any longer.

Imagine our astonishment to find that same baby, a mere three weeks later, looking as bad, if not worse than when it had first been brought to the hospital. Again Derri performed a miracle and brought that baby back to sound health; how she managed it truly amazed me. We kept Naumati and her baby in hospital for weeks and even when we could no longer spare a cot, we put the little baby in an old pram left to the ward by my predecessor.

Naumati made her living, such as it was, by collecting firewood in the jungle and carrying the huge loads of wood into Dharan, where she could sell a load for a rupee. If she started work very early she could sometimes manage two loads a day; two rupees a day to keep herself and her baby. I knew that if she returned to this employment the baby would starve yet again. So Anna let

## *The Kukri*

her come to our house and for two hours every morning she polished the floors and did some dusting. Anna gave her money, soap, clothes and Farex for the baby. She accepted all these things with a shrug: 'It is the will of the gods. The gods will provide.'

Naumati tried quite hard at first but soon lost interest; she became lazier and lazier and came later and later. During the time she was working with us, she spent every few minutes or so going to see her baby. She stayed three months with us before her smell finally got me down. She just wouldn't use Anna's soap. I think she sold it in Dharan; the house reeked from her body odour. By now the baby was so strong that there was little danger of it ever coming back with malnutrition. We dismissed her. Again it was 'the will of the gods'. When I next saw her at my post-natal clinic both she and the baby had remained in excellent health. That same day Derri, back in England, had sent us a cheque for Naumati. Hemlata, with her knowledge of the people and keen observation, looked curiously at the baby before she turned to Naumati and said, 'This baby is not a Rai.'

'Tell me more,' I asked Naumati, for suddenly I was intrigued.

Slowly the story evolved. Her husband had left their village for a few weeks to seek employment and meanwhile Naumati had been living in sin with a man of lower caste, a mere blacksmith. It was he who was the father of the child. Meanwhile, though her husband had been sending her money, Naumati was also being kept by the blacksmith. The husband had returned home earlier than expected and found the two living together. He had slit the blacksmith's throat with his kukri but was now languishing in gaol for life for his pains. So the unfortunate Naumati, who at one time had been supported by both men, suddenly found that there was no one to look after her. Worse still, she was pregnant.

The Nepalese dispose of their dead much as we do in the Western world—burial by land or water and by cremation.

Usually only men attend the funeral, when the eldest relative carries a naked kukri at the head of the funeral procession. Another close relative carries a bag, made of unwoven material, like the cloth covering the body. The bag contains copper coins which

## *Background*

represent the important part that this metal has played in life: the copper drinking flagon, plates, pots, and, of course, money. The bag is held in the left hand and the coins, usually of very low denomination, are very sparingly strewn along the route, in honour of the body that is being carried behind. Yet another relative carries a bag of rice which is also strewn every few yards in honour of the food that has been eaten by the deceased. One of these men also carries green bamboo shoots to plant on top of the grave, in the hope that they will take root and act as a living memorial for the years to come. Then there is much feasting.

With the Indian tribe of sweepers there is much rejoicing, with dancing and song, as soon as the person has died. This lucky man or woman has finished his or her dirty life on earth and will be reborn to a better one.

At times of poverty or during epidemics sufficient wood may not be available, so bodies may simply be thrown into the rivers. When a soldier dies, the army provides several gallons of diesel oil for the cremation, this oil being readily available in the cantonment, though wood may sometimes be scarce, for, even with so much forest about, the forestry officers forbid wanton destruction.

The few Christian Gurkhas are buried in a walled cemetery between the inner and outer perimeters of the cantonment. This beautiful sanctuary is surrounded by the enormous sal trees, where the exotic tropical birds make their nests. The silence is seldom disturbed and then only by the chatter of monkeys as they swing from branch to branch.

When a child dies, even though the mother may have known for some time that this was inevitable, she starts howling and wailing. This mourning continues for many hours and the mother refuses any sort of comfort. Next day, however, she will show no outward signs of grief at all. This excessive demonstration of sorrow may be put on to impress upon the gods that she has been a conscientious and loving mother.

One afternoon, when I was walking through the jungle near the cantonment, I accidentally stumbled across a little cemetery, full of children's graves. On top of each had been placed the child's shoes, a comb, dresses, feeding bottles or feeding bowls,

## *The Kukri*



depending on the age of the child. The mother prays that her baby is not really dead but only sleeping, the idea being that should the baby, or child, awake during this period, it will find its clothes and feeding utensils and will then not be frightened. This hope is held from thirteen to forty-five days, according to the tribe. After this period, it is accepted that the child is truly dead and the priest or Brahmin is called in. A feast is prepared and during this the priest prays for the peace of mind of the child.

Some Nepalese believe that they live through many lives, passing through such animals as the dog, cat, monkey, tiger, cow, before eventually living as man. They then believe that they pass through all the castes before gaining a permanent place in heaven.



## CHAPTER 5

# Witch Doctors



In England it is difficult to imagine the wonderful peace and quietness of life in Nepal. Indeed, it was this peace, the eternal sunshine and the clean fresh air that we loved most about the country. Not infrequently, however, this peace was disturbed by the persistent drumming of the witch doctors, who use their drums to frighten away the wizards, *bokso*, and the witches, *boksi*, and the evil spirits from the body. Illness is thus 'cured'. This always seemed to occur late at night when the beating kept us awake. The drums were often interspersed by the terrifying howls of packs of jackals as they raced by the cantonment. The domestic dogs hate jackals; the howls would be met by a chorus of barking from the various households. Then there would be peace again except for the persistent drumming.

## *Witch Doctors*

Gods, witch doctors, fear and superstition have an extraordinary stranglehold over the Nepalese. Even Gurkha officers, who are well educated, intelligent and apparently westernised, may, at time of crisis, consult with the witch doctor rather than with a real doctor. Some Nepalese only come to the B.M.H. when sacrifices to the gods have failed—but by then it could be too late.

Most feared of all the gods are the dreaded forest gods or *banjhankri*, who are alleged to live in the depth of the jungle, the male having the same form as man. It is with the male gods that the witch doctors claim they consult, but first they must be appeased by beating drums and sacrificing goats or chickens, allowing the spilt blood to fall on gold. The witch doctor then enters the jungle where he may remain six months.

The gods are said to live in a zigzag-shaped cave in the ground, the entrance being marked by a large stone. This is where the witch doctors claim they live, while being indoctrinated and inspired by the *banjhankri*, being fed with only earthworms while their water comes from rain or springs.

It is the wives of the *banjhankri* that are most feared. They are described as being naked with long golden hair covering them like a robe. These goddesses have enormous bosoms which they sling over their shoulders.

Should a Nepalese be so unlucky as to have an encounter with such a goddess, his only hope is to flee—and he must flee down a steep slope. The bosoms of the pursuing goddess will then flop over and trip her up and the man will escape. Should he flee up hill, then the goddess will immediately catch and devour him.

The nails of these goddesses are three inches long, while their feet are reversed so that they walk heel first. With each step, their heads turn to the opposite side, so that, as they walk, their heads turn from side to side like that of a clockwork doll.

How does a man become a witch doctor?

It is believed that the male forest god will kidnap an unscarred virgin boy of about twelve years old and take him into the forest. For six months the boy will live with the god, being hidden in the cave, out of sight of the man-eating goddess. After this period

## Background

he is returned to the edge of the jungle. He is now destined to become a witch doctor in later life.

The main *pujas*, or prayers, are held during the full moon. These are called *guru puja*, master prayers. This is the most important time for the witch doctors to pray to the forest gods.

The Nepalese believe that any kind of fit implies possession by the banjhankri, rather like the possession by the devil, described in the New Testament. In Nepal both the witch doctors and the British doctors are thought to have the power to cast out the banjhankri.

Animals and vegetation play an essential part in the witch doctors' cures. One day a Gurkha soldier came up having badly sliced his hand with an accidental kukri blow. This had occurred three days earlier. The wound however looked perfectly healthy except that it had been filled with some odd black substance. This was python fat. It had effectively sealed the bleeding.

A few years ago, a hunter had been surprised and knocked unconscious by a large python. With its tail wound around a tree, to give it sufficient stability for its kill, the python had wrapped itself round the unconscious man and slowly crushed him. A few moments later, the hunter's colleague arrived on the gruesome scene and, with the python otherwise distracted, he had no difficulty in blowing off the snake's head with his shotgun. He struggled desperately to release the massive loops off his friend, but all to no avail, his colleague was dead. The fat of this snake was carefully preserved. It was to act as a haemostatic agent for many years to come.

It is not always, however, practical to hunt, find, kill, skin and then cut out the fat of a python every time you need to stop bleeding! The most common method was to burn some cloth and then rub the black burnt material into the bleeding wound.

However, there are other more exotic methods of haemostasis. The peacock, the national bird of India, is also much respected in Nepal. This respect, and the fact that it is also illegal to kill the bird, does not stop some Nepalese villagers from hunting it, for the meat is delicious, being similar to pheasant, and its plumage beautiful. It is these feathers that are thought to be so effective

## *Witch Doctors*

for stopping bleeding. They are burnt and rubbed into the wound. They are also rubbed on the outside of the nose to stop nose-bleeds. An alternative method of curing a nose-bleed is to dig up some mud from the kitchen floor; this is also applied to the outside of the nose.

Tiger fat is much sought after. The Nepalese work long, strenuous, back-breaking hours in their fields in the hills, before collapsing into bed—only they have no beds and no pyjamas either. They simply sleep on the mud floor in their sweat-soaked working clothes and thus become natural victims of rheumatism.

They are great believers in tiger fat, which is rubbed into their aching joints by the witch doctor as he mumbles prayers to their gods. Should they be lucky enough to kill a tiger, then that meat is also consumed by the 'rheumatics' with great relish.

Diphtheria used to be a killing disease in England some thirty years ago. Now all young children are offered a series of three injections of triple vaccine. This vaccine effectively prevents diphtheria, tetanus and whooping cough, so that these diseases are rarely seen in the United Kingdom.

In Nepal there are few such vaccines and such as there are, are given to the children of the wealthy. Diphtheria kills by suffocation, as a membrane forms in the throat which spreads down to block the windpipe so that the poor child has to fight for each breath. The noise, or stridor, as we doctors call it, as the child attempts to suck in air to the oxygen-starved lungs, is pathetic to hear.

Only one thing can save such a child: an immediate emergency tracheostomy; the windpipe has to be opened through the front of the neck so that air can bypass the blocked larynx. There are few surgeons in Nepal skilled enough to perform such an operation. The distraught parents naturally turn to the witch doctor.

Here again the tiger is essential. The Adam's apple is carefully preserved whenever a tiger has been killed and is presented to the witch doctor. It is preserved for such emergencies as a diphtheria crisis. Water is first sprinkled on a stone and then the tiger's Adam's apple is rubbed in the water with much pomp and ceremony. The bone is then rubbed on the neck of the patient,

## Background

before the sufferer attempts to swallow the water that has been used to wet the stone.

The rest of the water is rubbed into the front of the elbows, palms and soles and finally the neck of the unfortunate villager. Some patients are indeed cured; but these lucky people were probably not suffering from diphtheria at all but from a quinsy (an abscess behind the tonsil), which has burst before causing suffocation, or from very severe tonsillitis, which finally resolved naturally.

Burns are so common that there are a number of local treatments. The white of an egg is the one most universally used. This is smeared on the burn, as soon after the accident has occurred as possible. Other witch doctors apply a whole egg, while chicken fat is also popular. Most irritating and messy, from my point of view, was a form of locally made ink which was spilt all over the burned surfaces. However, none of these methods seemed to do any harm to the burns, for the majority were surprisingly clean when the patients arrived at the B.M.H. Although many burn victims survived, the resulting scars, as well as the pock marks of smallpox, are very disfiguring. The witch doctors massaged sheep's fat into these scars which, in time, faded, as scars nearly always do.

The witch doctors have some pretty repulsive cures. Having ass's urine rubbed all over the body in cases of typhoid fever is revolting enough, but sometimes the poor sufferer has to drink it as well. . . . Actually, there is an alternative: collecting the mud from the kitchen floor which is then burnt before consumption.

Finally, I did discover a more palatable cure for enteric fever. If orange button chrysanthemum heads, called *shypatri* by the Nepalese, were first dried and then soaked in water till the water is coloured yellow, before being eaten, this was equally as effective as both mud and urine, but, of course, not so readily available. This yellow water can now be used as a cure for earache or discharging ears, an all too common disease amongst the Nepalese. The water is simply dripped into the affected ears.

Urine is perhaps the most common agent for cures. It is also

## *Witch Doctors*

put into the ears for earache, though ideally the rhinoceros's urine should be used. The latter is given to toddlers to rid them of their worms. Rhinoceros's urine is the most sought-after cure for enteric fever; incidentally this is also a cure for pneumonia. The truth is that urine, always available, is offered as a simple cure for everything.

A colleague of mine, Major Alastair Langlands, was once trekking in the hills. One of his party developed a pink eye which the major was effectively and correctly treating with chloramphenicol eye ointment. However, an Indian Army havildar, who was in the major's party, knew better. He spurned the sahib's medicine and ordered the unfortunate porter to urinate and then bathe his eyes in the resultant fluid.

Following this, there was a free discussion of the value of urine and one Gurkha warrant officer, who had served in the British army eighteen years and who was then actually living in the cantonment, where the British Military Hospital was situated at that time, claimed to have successfully treated his child's rash by urinating over his face. It could be cured only in that way as the rash was the result of a spell cast by a wicked woman. He also informed Alastair that urine is a cure for snake bites.

Again, there are innumerable cures for snake bites. One day Jean, one of the Q.A.R.A.N.C. sisters in charge of the G.O.R. ward, showed me a little bees' nest on top of the male surgical ward. The bees were much smaller than any I had seen before and the nest itself was correspondingly tiny.

I had in the ward at that time a patient called Chatrabahadur (*bahadur* means 'warrior') who had suffered from a large ulcer in his leg for many months. This I had successfully skin grafted and, as part of his gratitude, he solemnly told Jean about the virtues of these little bees. They produce only a small quantity of honey but this has a powerful anti-snake venom effect. A little of the honey should be applied to the bite, to cause a local sweat. The venom comes out with the sweat and the victim will survive.

Many Nepalese believe that prayer, combined with the sacrifice of a bird or animal, in the name of a god, is necessary for them to retain their health or luck. As in black magic sacrifices all over

## Background

the world, it is the sacrifice of black hens, cocks and goats that is thought to be most effective.

However, I felt the black colour was being taken a little too far when I was told that if a person has been poisoned, he can only be cured by the consumption of the stool of a black dog. I can readily understand how that would work, for even the thought of ingesting such an obnoxious emetic would be enough to nauseate me, and if I actually had to eat any stool, this would cause me such severe retching and vomiting, that I am certain I would soon rid my body of the poison.

Every disease has its own treatment; usually the more revolting, the more the Nepalese like it. Another method of curing pneumonia requires earthworms which are always present in fairly large numbers in the earth round the roots of banana trees. About a handful of these worms are dug up and boiled. They are then wrung out through a cloth. The resulting fluid is fed to the sufferer.

Tuberculosis is the most terrible scourge of the Nepalese. There are no health statistics in Nepal but there must be hundreds of thousands of sufferers, in the little country of only ten million. The morbidity and mortality rate from this disease is unbelievable.

The Nepalese have three names for this killing disease, each being very descriptive. The slang name for T.B. is *sukenas* and this word is most widely recognised. It means the 'lean' or 'thin' disease, but literally means a certain poison, possibly arsenic, which murderers might slip into tea or food resulting in the victim losing a lot of weight, becoming yellow and developing a protruding, swollen abdomen and finally succumbing.

The correct name for T.B. is *chayrog* ('destruction' or 'devastating disease'). However, if pronounced incorrectly the name implies epilepsy. So I usually used the word *sukenas* when speaking to my patients.

The saddest name for T.B. is *Raj Banshi Rog*, Royal Family Disease, or King's Disease, as only a king, or at least a very rich person, can afford to be treated in Nepal. The course of anti-T.B. treatment with the three drugs, streptomycin, parasulphonic acid and isoniazid, will cost about £25 to effect a cure—far too much

## *Witch Doctors*

money for the great majority of Nepalese, so the witch doctor has to be consulted instead.

They couldn't have chosen a more diseased animal than the jackal to cure such a debilitating disease. For the jackal harbours the rabies virus. It is the jackal's meat that is given to T.B. sufferers.

There is a main south gate to the cantonment and this is guarded by Gurkha soldiers. One night the guard heard a loud clatter and, looking up, saw a jackal, some thirty feet from him, that had been up to its usual tricks of upsetting dustbins while scavenging for food. The guard, disgusted with the jackal, especially as he would now have to clear up the mess, threw stones at the brute.

Normally the cowardly animal would run away, but not so this jackal. Incensed by the audacity of the guard, the jackal left the upturned bin and leapt at the soldier's face. The soldier threw up his arm to protect himself and the jackal plunged its teeth into the raised arm, sending the astonished soldier crashing to the ground.

The soldier grabbed the jackal by its neck and the two of them rolled over and over on the ground, the wild animal clawing at the man while the soldier held its neck in a vice-like grip, keeping the vicious teeth away from his face.

The guard, far the heavier and stronger of the two, repeatedly struck the jackal's head against the cement steps until the jackal was unconscious. Then the guard slit its throat with his kukri and drank its blood. Not only did his wounds heal up but he escaped both rabies and tetanus. Soon after, the soldier went off on his six-months' long leave, having recently returned from a three-year tour in Malaya, and, on his return from the hills, went straight to Singapore. I never saw him again and could never ascertain why he had in fact drunk the blood.

Dog bites are very common, but to ensure sound healing you should first catch the dog, cut off its hair or some of it, burn that hair and mix it with rat's urine. The resultant mixture is then massaged into the bites.

Bed-wetting, or nocturnal enuresis, is a misfortune that occurs throughout the world. It is a most distressing condition and very



## Background

hard to cure. It is possible that these sufferers sleep too deeply and, not realising that their bladders are full, urinate in their sleep. We try to treat bed-wetting by lessening the depth of sleep by a stimulant called dexedrine. The dose has to be carefully judged, for there is a tremendous individual variation to the effects of this drug; too strong a dose can prevent sleep altogether. Other methods used include restricting fluids for several hours before retiring to bed, but even then accidents occur. The use of alarms to wake the unfortunate person in the middle of the night so that he can void his bladder before the accident occurs are also tried, but again meet with failure. We also try a bell system, when an alarm is rung the moment any urine is passed. The sufferer awakes at once, but usually too late, for the accident has already occurred. Finally, we often have to seek the advice of a psychiatrist. Yet the failure rate of all these treatments is still very high in this depressing condition. More recently a new drug called Tofranil has been found to be the most effective method of treating this ailment. In Nepal all these attempts are replaced by one simple remedy, and, for all I know, it may well be as effective as anything I could offer. There are a lot of fresh water crabs in the rivers of Nepal. These are collected, burnt and the residue fed to the bed-wetters.

Headaches are treated by plucking out hairs from the appropriate side or by the application of parts of green leaves to the temples. In Kathmandu, there is a huge wooden door covered in nails; this is for treating toothache. Whenever the pain becomes unbearable you get a nail, the bigger the better, and hammer it into the door, leaving your ache with the nail. But Kathmandu was a long way from Dharan. The hospital runner had a nasty diseased tooth that had caused him a lot of misery in the past. I first learnt about this tooth when I noticed a little bag hanging from his left ear. When I looked more closely, I saw that the man was in severe pain and that the side of his face was swollen. He reluctantly explained to me how he had been to see the witch doctor who had given him some magic herbs which were sewn up in a cloth, as a magic charm or *buti*, and now hung opposite his decaying tooth. He had great faith in the witch doctor, as he

## *Witch Doctors*

had had this frightful toothache several times in the past and each time the buti had eventually cured him.

I offered him my services but he gave me a look as if to say: 'You must be joking!'

Next day the poor man really was suffering; his face was swollen to twice the normal size. He actually came voluntarily to see me. He had a huge dental abscess and the tooth was so mobile that an extraction would have been as simple as falling off a chair. He agreed to attend my minor operating session later that morning to have the tooth removed. He duly arrived. However, when it came to his turn, he was nowhere to be seen. He had vanished.

I saw him around the hospital a week later. The abscess had burst spontaneously and he was now free of pain once more—his witch doctor and the buti had cured him yet again. But he still had his decayed tooth; he would be a regular customer of that witch doctor for quite some time.

Alastair witnessed toothache being cured on one of his treks. First the witch doctor carefully examined the decayed tooth. During this examination he cunningly placed a tiny live insect inside the cavity of the affected tooth. After this, with much shouting and special commands, the witch doctor triumphantly removed the wriggling insect from the cavity of the tooth. With much pomp, he pronounced the man to be cured of his toothache. Indeed he was—or so he professed to be. There is no doubt that in the hills faith-healing and persuasion procure many cures.

Osteomyelitis—infection of the inside of bones—is treated with the help of the sambur, a large deer. The sambur's bone marrow—the soft vascular centre part of the bone—is rubbed on to the swollen painful leg of the sufferer. An alternative is to cut off the lower part of the sambur's leg and burn off the flesh until only the hoof remains. Meanwhile, water has been collected into which gold has been dipped; this water is sprinkled on a stone. The hoof is first rubbed on the stone and then on to the affected limb.

Other tribes believe in a much more dramatic, though indeed a more successful, method. They heat a pointed iron rod until it is red hot and then plunge the rod right through the affected bone. This agonising treatment may well be effective. Being red hot,

## *Background*

the iron acts as a cautery and prevents too much bleeding as it sizzles through the flesh and bone, causing a large hole in the septic bone. Through this hole, pus and dead bone may discharge and the disease could truly be cured.

Breast abscesses are common throughout the world and in remote Nepal there must be many sufferers. Such abscesses normally result from bacteria invading the breast through a little crack in the nipple; these abscesses nearly always occur in a lactating woman, for the child abrades the nipple.

The treatment is simple; incision of the ripe abscess, which will practically disappear within a week. This is an occasion where drainage of a breast is infinitely better than the administration of antibiotics, for these occasionally seem to bottle up the infection so that the abscess neither develops nor does it diminish.

Folklore has developed its own treatment which can only be carried out by a person who can approximate his or her index and little fingers across the back of the two middle fingers. I can't. First, the sufferer has to get up at the crack of dawn, and, without speaking to a soul, sit on the middle of her front doorstep. The 'contortionist' then strokes the infected breast with her fingers seven times for three consecutive days.

An alternative method is to rub the tender breast seven to nine times with a comb. All these methods must be successful for such an abscess will normally enlarge, simply burst and then the infection drains away.

Legend recounts that the god Sankha had seven daughters, one of whom was called Mai or Mata, which means 'smallpox'. On one occasion Mai became so incensed when she was not worshipped that she inflicted her terrible marks upon the erring person. The Nepalese believe that they too might be visited by her, if they fail to pray to her.

The Indian races in Nepal, the Bahuns and Chettris, worship a smallpox victim as if they were worshipping the goddess Mai. They will put the diseased woman to bed, place flowers in her hair and treat her like an Indian goddess. They will make the house spotless, praying fervently that the goddess will be so pleased that she will depart.

## *Witch Doctors*

The true Nepalese hill people however hide their victim in their homes and try to hush up the disease. They treat the patient by smearing him or her with uncooked pork fat. Prophylaxis is practised in the households that are so far unaffected by the disease, during an epidemic of smallpox or chickenpox. (The latter condition can also be very serious amongst a non-immune community as the hill people are.) The families stay in their houses and only consume boiled food. Boiled pork is thought to be the most powerful prophylactic agent. Rice, potatoes and tomatoes are all carefully boiled before consumption. They cut off the mouth of a pig and hang this up on the door outside, praying this will protect the household from a visitation from Mai.

My staff estimated that between 150 and 500 deaths occurred around Dharan from smallpox in the three months before my arrival at the B.M.H., and my predecessor had estimated that a thousand had died in this eastern part of Nepal in that same period. Epidemics sweep through the country every few years.

## Smoking

The smoking of *bidis*, the locally-made cigarettes, is practically universal. Even five-year-olds may soon become quite addicted. Apart from the obvious ill effects on their lungs of bronchitis and the aggravation of pulmonary tuberculosis, cigarette smoking can also be harmful to blood vessels, the nicotine in the tobacco causing the arteries to contract. As in Western countries, both cancer of the lung and coronary thrombosis are associated with this excessive cigarette smoking.

Maitalal had been a Gurkha soldier until about two years before his admission to the B.M.H. During his lazy days in Singapore he had smoked forty or more cigarettes a day. Later he was to pay the price. At first he noticed how cold one of his feet and legs became at night and how, after walking only half a mile, he had developed such a pain in the calf muscles that he had had to rest for several minutes before he could continue. Fourteen months before I met him, the tip of one of the toes of his right foot became painful. He thought it was due to rubbing against his new shoes, and fiddled with the sore area with an open safety-pin. As a result, his toe became very painful and a black area developed. Two months later it was his left foot that began to feel colder and Maitalal became a very worried man.

He had not been praying to his gods and he assumed that now they were taking their vengeance on him. So one day a visiting witch doctor came to his village and Maitalal told him of his predicament. He gave chickens and goats to the witch doctor to sacrifice on his behalf. All to no avail, the pain in both his feet got worse, so bad in fact that soon he couldn't even sleep at night.

Now the Shining Hospital (so called because it was built with aluminium which reflected the sun) at Pokhara was only three days' journey from his home. One day, he plucked up courage,

## *Smoking*

arranged porters, and was carried to the hospital. There the doctors removed the part of the toe which was black. Though this relieved much of the pain in that particular toe, he was still suffering so much that he spent his pension money to fly from Pokhara to the Medical Reception Station at Paklihawa. Early gangrene had now developed and was spreading to the soles of both his feet. The doctor at Paklihawa told him that, if he continued to smoke, he would undoubtedly lose both his legs, for the diagnosis was Buerger's disease, which affects the tiny arteries of the feet. Only by completely stopping smoking could he hope to slow down this progressive disease, as then the arteries would have a chance to relax.

But how can you stop smoking when you have smoked ever since you were seven years old? I do not know. I am fortunate in never having smoked. All I do know is, that it is very difficult to diet.

From Paklihawa, Maitalal was sent by train to the B.M.H. I wasted no time and the very next morning I operated upon him. It was really impossible for me to explain to him, how I wanted to make a large incision across his abdomen, in order to relieve the pain in his feet. I didn't even try. If he could have enough faith in the witch doctors to give them goats to sacrifice to gods whose names he didn't even know, then he was going to have to have compulsory faith in me. I made an incision in his right side from the tip of his last rib to within two inches of his navel. I cut through the three layers of muscles until I reached the peritoneum, which is the thin transparent layer that covers the internal organs of the abdomen. This I pushed forward out of the way until I found the psoas muscle. This, incidentally, would be the fillet of steak in an ox! Then I identified the huge vein which drains all the blood from the abdomen and legs. I found the sympathetic nervous chain under this, running from the diaphragm above to under the large vessels coming from the right leg below. I removed as much of this chain of nervous tissue as possible; by destroying this nerve, the blood supply to the leg is increased. I felt the leg; it was now warm and dry. Two and a half weeks later I repeated the operation on the left side.

## *Background*

I had now done all I could. Both legs were much warmer than before the operation because an increased blood supply was getting through to the damaged tissues. The area of gangrene slowly began to heal up and with this the pain in his feet gradually disappeared.

After a month, I sent him back to Paklihawa. His feet had now healed, he could now walk with very little pain. He had completely given up smoking, encouraged perhaps by my telling him that a modest amount of rakshi would, by helping to dilate the arteries, improve his condition still further.

He never once questioned the two curious incisions on his abdomen, nor did he ever grumble about the pain that these wounds must have caused him. Nothing could be as bad as the pain of a gangrene he had already suffered.

## Dashera, the Animal Slaughter

The Dashera festivities begin on the first day of the new moon in October and culminate on the tenth day with the decapitation ceremony. Dashera is a very important occasion for the Gurkhas as it is the soldiers' feast. During it they make sacrifices to the arms that are used in battle. The festival is held in honour of Durga, Goddess of War, and also commemorates the story in the Hindu mythology of Rama's great victory over the demon Ravana. During the ten days, scenes are enacted out of this battle, the sacrificial ceremony on the tenth day symbolising the death of Ravana.

For several days prior to Dashera, the cantonment temple was filled by Gurkhas praying that the main sacrifice would proceed without a hitch, for the honour of the regiment depends upon a single-stroke execution. Meanwhile, the four Gurkhas who had been chosen for the honour of executing the animals had retired to live alone in prayer. One of them had been the cantonment's chief executioner at the Dashera festival for the past fourteen years. These four men had neither taken part in any of the earlier festivities nor had they touched any rakshi during their period of meditation.

The final ceremony was held in the baking heat between ten and eleven in the morning. The arena was in the middle of the camp, just outside the cantonment temple, and in the middle was the sacrificial pole. The surrounding area was packed by a seething mass of Nepalese, their wives and their children, irrespective of age.

The soldiers' rifles, partly in whose honour Dashera is held, were lined up at one end of the small arena. In other parts were placed the food and flowers. The high priest entered, blessed the weapons by sprinkling them with holy water, then he released some doves and the ceremony began. The chief amongst the four



## *Background*

chosen Gurkhas, selected for his strength and expertise, walked into the arena carrying a specially long kukri. I was amazed at how scruffy he looked. The Gurkha soldier is usually very smart indeed. A large melon was lying in front of the sacrificial post and in a split second it had been perfectly bisected. The crowd roared their approval. A large goat was then dragged in; his head was held to the post by a rope, while soldiers held the goat's legs. In a flash, to a howl of pleasure, the goat was decapitated. The carcass was dragged right round the small arena, to deafening applause. A circle of blood had been made. Then followed the decapitation of a whole series of goats, each witnessing the death of the one before and smelling the spilt blood. The waiting goats became more and more restless as the executions proceeded. Finally came the big moment, a small buffalo was dragged in. The poor brute was of course very much stronger than the goats and put up a terrific fight. The soldiers finally had to cover up the spilt goat blood with earth and straw so that the terrified buffalo could no longer smell it and so became a little more manageable. But it was still a long struggle before the animal was in the right position with its head held firmly to the pole. The priest then put some flowers on the poor brute's neck and suddenly, one handed, the soldier cut off the buffalo's head, an incredible feat of strength and skill. This successful blow was to be a good omen for the regiment for the whole of the following year. Sometimes the buffalo is not even held to the post, the soldier simply waiting for the optimum split second before executing the blow.

Occasionally, although I never witnessed such a disaster, the soldier, overcome by the tension of the moment, would miss the correct spot and then, in a panic, slash away at the animal's neck. This was a monumental disgrace, not only to the soldier but to the entire regiment.

Following the sacrifice of these buffalo, the soldiers, their wives and their children each dragged up their own goats, chickens or ducks to be executed, though I noticed that the soldiers were not quite so expert with some of the fowls, but this did not appear to matter at all. The heads of all the animals were lined up by the stacked rifles.

## *Dashera, the Animal Slaughter*

Once, in a nearby village, during such a ceremony, a buffalo had struggled out of line and a young man had darted forward to push it back into position. He moved too late. The kukri was already hurtling down. The blow caught the young man across the shoulder-blade, cutting deeply into the chest. Nobody moved. No one raised a finger to help him. This disaster was the greatest thing that could happen to the lad; he was to die, as indeed he did, as a direct personal sacrifice to Durga and Rama and thus would gain a very special place in heaven.

In the past—how distant I do not know—young virgin girls and boys were also sacrificed at the Dashera festival. Strangers travelling at this time of year were likewise in danger of a similar fate.

Following the ceremony at the cantonment, the soldiers who took part in the sacrifice were honoured by being presented with white turbans made of five yards of an expensive white cloth, which was wound round their heads by the British officers. They were then given money and this was followed by much dancing and gaiety. The four men soon made up for their forced abstinence. I also, as one of the British officers, was expected to take part in this form of Nepalese dancing which was vaguely like twisting. I found it not only embarrassing but terribly hot work.



PART TWO

Animal Section





## Bhalu the Bear

'Doctor come quickly!' was the frantic message I received over the phone one lunch-time. 'There is a woman here whose face has been burnt away. She looks terrible!'

The sister wasn't quite right with her diagnosis but a ghastly, awful sight greeted me. There, on the trolley, lay a young girl of only thirteen whose face had been ripped away by a large bear. The blood had congealed and blackened on the remnants of her face, so that it looked for all the world like a terrible burn. One eye was obviously useless, caked up, dried and blackened, from the stale blood and tropical heat; the eyelids had gone. The right eye, although concealed by the stale blood, was closed and was possibly intact. Her parents told me that they had been able to make out some movements with this eye for a few minutes following the assault. To add to the macabre picture, flies were crawling all over her 'face'. The awful attack had occurred five days earlier.

I didn't know what to think when I first saw her. I drew in several short breaths through my clenched teeth, which I always seem to do when things look particularly unpleasant. There was nothing more hideous in the Chamber of Horrors at Madame Tussaud's than this girl's face.

'I hope she dies,' breathed the sister.

'Please, just save her life!' pleaded the distraught mother.

'Just like war wounds,' sighed the matron, as she had been present when I received the phone message and had come over with me. She had seen soldiers whose faces had been blown off by shells in the last war.

Only thirteen years old, condemned to live with the most terrible disfigurement all her life; no man would marry her. Could anyone even look at her? I could barely look myself.

## *Animal Section*

I immediately prescribed a course of chemotherapy, to combat the infection that must have been lurking, from contact with such filthy rags and flies for five long days. I also gave her an injection of anti-tetanus serum; I didn't want lockjaw to complicate the issue further.

This would have been one of those occasions when a side-ward would have been ideal to nurse the little girl in, but there just wasn't one. Instead, we had to hide her behind screens in the children's portion of the families' ward. I didn't want to upset the other patients and, if anyone was to see her through a gap in the screens, it was better to be a child, for children will accept anything or anybody and are not as likely to be so distressed by disfigurements as adults. The little girl was wonderfully good, she hardly even murmured. It was only now, with the girl comfortably in bed, that I had time to question her parents to find out what had happened.

The family were Chettris and the little girl's name was Narmaya. They had come from a small village called Dasmagyia, near Tellock, in number six district. Narmaya, with her brother Ganeshbahadur, who was twenty, were guarding their parents' cows which were grazing in the forest. It was almost dark but Ganeshbahadur was still busy cutting grass for the cows to chew during the night. Narmaya had gone round collecting the cows, when she saw something moving in the bushes near by, and, thinking it was one of her charges, went straight up to the bush. There, to her horror, was *kanthe bhalu*, the black Himalayan bear with its V-shaped white breast markings. The bear lunged. Narmaya screamed. . . .

Hearing that piercing, spine-chilling scream, Ganeshbahadur leapt up from his grass cutting and tore over to the spot. He saw the bear and ran straight at it, frantically waving his hands and shouting at the top of his voice. His superhuman courage had the desired effect. The bear bolted.

The countryside round this village is hilly, with scattered forest and open ground, interspersed with bushes. Bears have lived a mile and a half from the Chettris' house for many years. These animals make themselves a comfortable home amongst the

## *Bhalu the Bear*

thickest bushes by flooring their lair with twigs. Their favourite local diet is a jungle root, called *bako*, and bamboo shoots.

This was not the family's first encounter with *bhalu*, for Bhaktabahadur, Narmaya's father, had also had a terrifying experience. As a young lad, he had climbed up a tree after some fruit when, to his horror, he found that a bear was already up that same tree. Then followed a hair-raising chase from branch to branch before Bhaktabahadur slid down the tree and hid on the opposite side of the trunk. The bear had spotted him, however, and leapt down on top of him, catching the lad's head with its paw. Bhakta had been thrown into a nearby hollow in the ground by the velocity of the bear's leap. He had lain on his face feigning death. The bear had left him undisturbed.

Leopards are another hazard to life in this hill village, and whenever one is killed the skin is paraded round the village and then around all the neighbouring villages by the proud hunter. Wherever he goes, he is given donations of food, livestock or money for this brave act, for he has helped rid the area of a pest. Leopards can take a fearful toll of chickens, pigs and especially dogs, for which they have a particular liking.

Narmaya had lost surprisingly little blood from the attack, yet, when her parents saw her ravaged face, they feared that she must die and in despair had carried her back to their house to await death. They hadn't even applied herbs or cow dung to her face, as is so often the treatment adopted. They didn't call in the witch doctor. It wasn't worth it, she was going to die. It was the will of the gods.

Two days passed, yet miraculously, Narmaya was still alive. Perhaps she wasn't going to die after all, they thought. When they finally decided to get help they certainly moved fast. They sat Narmaya in a basket, covering the top with a blanket to keep the sun off the remnants of her face. Then Harkabahadur, her cousin, and Dilbahadur, her uncle, assisted Bhaktabahadur in carrying his daughter to Dharan. Her mother, Ratnamaya, came along as well to help do the cooking and the other feminine chores. The three men took it in turns to carry Narmaya, stopping only at Dhankuta hospital where she was given an injection of penicillin.



## *Animal Section*

After their brief rest, they set off once again for Dharan. They ran most of the way, doing a five-day journey in three days, a most creditable performance. Ganeshbahadur was left behind in charge of his four younger brothers and sisters. The youngest was only five.

After I had given them each a large bowl of chicken curry, I asked the three men to donate a pint of blood for Narmaya. Much to my relief, they did so without a murmur. Next day we took Narmaya to the theatre where I spent three hours trying to put her face together again.

The accident could not have occurred at a more inconvenient time. The theatre had long needed renovating and decorating. One of my colleagues was away at the time and this always threw additional work on the two remaining doctors. I had decided that this would be the most opportune time to close the theatre and had postponed my operating lists for ten days, planning to do only emergencies. The workmen had started in the theatre that very day.

I worked from eleven that morning to two in the afternoon, using a side-ward as my theatre. The outside temperature was 116°F that day and there was no air conditioning in the ward. I decided to tackle the problem of Narmaya's face much as a child does a jigsaw puzzle; by starting at the edges and working inwards. I prayed that there would be no missing pieces as this has so often been my experience when doing old puzzles. I found immediately that I could clean only a very small area of her face before repairing it at once, for otherwise the bleeding became uncontrollable. I soon discovered exactly what the bear had done. His claws had started in her forehead and simply ripped her face off her, leaving her skull, a broken skeleton of a nose, a broken cheek-bone and the whole upper and lower jaws naked to the air. The whole area was covered with thick congealed blood to which leaves and other foliage had stuck when she had fallen on her poor mutilated face after the terrible assault.

'If only I could have had her on that first day—' I thought grimly, 'it would all have been so much easier.'

There is no point in 'if-ing' in this life, and the worst always

## *Bhalu the Bear*

seemed to happen in Nepal. As I slowly worked down from her forehead and around the edges of her face, my initial discoveries were reassuring. The skull, though deeply grooved by the claws, had not actually been penetrated. There was therefore no danger of brain damage or meningitis. However, the left eyelid was no more and the exposed eye had dried up so much in these five days that it was now useless. Her nose and the left half of the upper lip had been left behind in the bear's claws. (I had previously had to ask the horrid question of whether they had seen any flesh on the ground by Narmaya, but they hadn't.) The left cheek-bone was broken and very mobile but I knew that if I removed it, there would be nothing on which to build a new cheek or support the orbit to hold even an artificial eye. In addition, even though the bone was only just attached to the flesh, its final removal might have resulted in a very frightening haemorrhage. I decided simply to leave it alone. Narmaya was only thirteen and nature can perform miracles especially at such a tender age. Her right eye had been mercifully spared. There were however terribly deep gashes above it and simply no flesh at all below that lower eyelid, so that the whole cheek-bone and upper jaw was just a skeleton. This didn't matter so much, the vital thing was that the eye was safe and I realised immediately that her life might be worth living after all. I went on with my work with new heart. The next wonderful stroke of good fortune was that not only had she still a lower lip but that lip was mostly intact. The claws had simply ripped the lip off the mandible, so that it hung down, inside out, like a macabre necklace around her neck. The tissues were swollen and infected so that getting them together was an awful problem. It was an even bigger problem working out which piece should fit where or if it might not be more use somewhere else. It was all so difficult, especially in that heat. Finally I had finished, not because I wanted to but because I had run out of pieces. My original fears had been justified. I felt depressed. During the operation she had had the three pints of blood that her relatives had donated her, and, next day, we checked her haemoglobin. It had reached the fantastic level for Nepal of 100 per cent.

The afternoon following the operation, Bhaktabahadur and

## *Animal Section*

Ratnamaya came to see their daughter in the ward. The mother was speechless. She was thrilled with the result. She broke down and wept with gratitude. She bowed to the nursing staff and sisters with her hands together as if in prayer with the Indian greeting, *namaste*. Bhaktabahadur, with his kukri still stuck in his binder, said that surely this could only be the work of gods. I wasn't present at this interview but I felt sick with worry when I heard about it. I had warned the sister that there was a very long



way to go. The tissues might not heal, the infection might get worse, I still had to construct a new nose, make a new cheek and finally, one day give her a glass eye.

I asked Ratnamaya to stay with her daughter for as long as possible; her presence would be a great comfort to Narmaya who, having suffered such grievous injuries had then found herself in what was virtually a different world from anything she had ever known. The men had to leave to look after their families and livestock; they all set off for home next morning. Ratnamaya herself left just a few days later, she had been missing her little ones too much. It was a pity she had to go; Narmaya needed someone close to her.

Then followed a series of skin grafting operations, during

## *Bhalu the Bear*

which we were able to cover all the exposed bone, so that her upper jaw and cheek-bones were saved. By now, however, the tissues were getting tired and the time had come to give Narmaya a long rest from surgery. She was suffering from an illness that most long-term in-patients develop, especially if they have once been the centre of attention, for quite a considerable period of time. As the weeks pass and their condition improves, they naturally see far less of the doctors and nurses. Others have taken their place in what is, in truth, an unenviable situation. This results in a syndrome of sulkiness, moodiness and uncooperation which leads to inevitable depression.

The nursing sisters had been perhaps a little too attentive to her, feeling, as they did, so very sorry for her. One of the sisters, June, had had a pair of her own pyjamas altered to fit Narmaya and she spent many hours doing Narmaya's hair. Narmaya really looked quite attractive, even with a piece of gauze covering the most disfigured half of her face.

Finally, another sister, Jean, had completed a beautiful little dress for Narmaya by the time the little girl was to go home. Her father had returned to the B.M.H., after we had sent a message to his village saying that his daughter was ready to leave. Narmaya's hair had been set in pretty black curls for her return home, though I wondered in just what state she would return for the next series of plastic surgery operations. It didn't matter that her hair would be filthy, that her clothes would be torn and dirty, all that mattered was what condition her face would be in. One minor setback occurred on that final day, as Jean had measured Narmaya for her dress some four weeks earlier. When it came to the final fitting, on the day of her departure, they found that Narmaya had gained so much weight on the B.M.H. food, that her poppers would just not do up! The wise sister left the original poppers where they were and quickly sewed in another set at least three inches further out. She knew that Narmaya would soon lose weight, especially as they had a five days' climb across the mountains.

That first night, after she had left the warmth and security of her new-found friends, must have been a grim one for poor little

## *Animal Section*

Narmaya. It rained continuously for eighteen hours. This rain would have caused the rivers to rise so high that, in all probability, they would have had to wait on the bank of the river two or three days for the water to have abated enough for them to attempt a crossing. Even then the water would probably have been up to the level of Narmaya's armpits. There were four such rivers to cross, so their journey could have taken not five but nearer fifteen days. Still, Narmaya was due to return in January, when the weather is lovely and cool and the waters a mere trickle.

I didn't really know what to expect when I was next to see Narmaya; in fact I knew I would be half-afraid even to look at her face. She duly arrived one Sunday afternoon in January, six months after leaving the B.M.H. She and her father had got home in six days, having battled through the raging rivers. It had taken them only four days to return to the B.M.H. The left side of Narmaya's face was not a pretty sight, for it was here that most of the flesh was missing. The right side had however healed well. As all plastic surgeons know, complicated surgery to the face is a long drawn-out and often frustrating affair. If only I could have had another two years in which to reconstruct the little girl's face. . . .

I decided first to try to repair her upper lip. The tissues seemed to come together nicely, the six months' rest had greatly improved the blood supply to her face. In addition, she had grown a lot in these six months. At first the operation appeared successful, but as the days went by the new lip slowly parted until only the mucosa, the actual pink of the lip margin, held together. Still, at least she had a complete mouth.

With much sadness in my heart, I sent her home a second time, asking her to come and see us after the next monsoon for then, when the tissues had again sufficiently recovered their blood supply, we, or rather my successor, could perform a pedicle graft, by constructing a bridge of skin from her forearm to fill the gap in her lip.

If I had been a rich man I would have brought her back to England and taken her to the plastic surgeons at East Grinstead Hospital in Sussex. There they would undoubtedly have made her more beautiful than I could have done.

## Bhalu and the Police

Not only was I surgeon to the people of Eastern Nepal but soon after my arrival in the country I found I was also surgeon to the Nepalese army and police. Chandrabahadur, twenty-eight, was head constable of Chainpur region. The village of Chainpur was approximately forty miles from Dharan and about four days' walk away. While Dharan has become a thriving town, because of the cantonment and the excellent road to India, Chainpur has kept much of its individuality, and the wild animals have not been frightened away, as they have mostly round Dharan. Here in Chainpur, tiger, leopard and deer abound but, most frightening of all, the *bhalu* are plentiful.

The trouble all started about two months earlier when the sugar-cane crops first began to ripen, in December 1967. The bears, naturally, thought the sugar was their right, while the Nepalese villagers considered that, as they had planted the sugar and owned the fields, it was theirs. First six people had been attacked all about the face and head by the bears, although, fortunately, none of these injuries was serious. Three weeks before Chandrabahadur's fatal day, a pregnant woman had actually been killed by a bear in the same sugar-cane field. The entire village had turned out, gone to the field and avenged the woman.

Peace reigned for a few days but three weeks later, three villagers were surprised by a mother bear with her baby, as they were cutting sugar and grass in the field. The mother bear, enraged at this intrusion on her privacy, attacked, wounding an old woman about the head, biting a man in his side and inflicting shoulder injuries on yet another man. They were all three taken to the health centre at Chainpur, while the relatives carried news of this new attack to the police. They feared that soon the bears would destroy the whole village.

## *Animal Section*

Next day the police inspector, accompanied by Chandrabahadur and two other policemen, set out to kill the bear. They had two guns between them, an old twelve-bore which the Nepalese term a *totawal*, carried by Chandrabahadur, and a more modern gun carried by the inspector. They decided on a double flanking movement round the field and, whoever heard a gun go off would come to the other's assistance. Now the sugar-cane was contained in a walled field, so Chandrabahadur and his colleague climbed over this wall and set off round the perimeter. They didn't get very far. It was Chandrabahadur's lot to be the first one found by the bear. She leapt at him, so he hastily tried to fire his gun. He pulled the trigger. Nothing happened. He flung himself to the ground, as the bear leapt clean over him. Meanwhile, his colleague had fled to the wall and, as he was clambering over it, the bear caught his calf, biting his leg cruelly. The man, however, in his desperation found superhuman strength and kicked the bear off as he rolled over the wall to safety.

Chandrabahadur leapt to his feet but only just in time, for the bear had turned towards him. The next fifteen minutes were the most terrifying and tragic moments of Chandrabahadur's whole life. He knew that, if he could once hit the bear on the nose, he would be saved, for the Nepalese believe that if the bear's nose is injured then the bear will die. As Chandrabahadur jabbed away at the bear's face with the muzzle of his gun, he screamed frantically for help, but the villagers, who had accompanied them all at a distance, were also too frightened and had run away. Finally, the bear tore the useless gun from Chandrabahadur's exhausted hands. With Chandrabahadur completely defenceless, the bear spat at his face. It was as if the saliva contained chillies for it caused such an intense burning pain in his eyes that Chandrabahadur was temporarily blinded. Now the furious bear had Chandrabahadur at her mercy and, of course, showed none. The bear picked Chandrabahadur up and hurled him against the wall. Chandrabahadur couldn't even move. She gathered him up a second time and threw him again. He hit the earth with a sickening thud. Chandrabahadur lay blinded on the ground, there was no breath left in his body. He turned over and

## *Bhalu and the Police*

held his bleeding hands to his face, lying as still as possible and feigning death. But the bear had seen the movements of his hands and cruelly clawed Chandrabahadur's back. Chandrabahadur moaned. The bear turned him over with her claws and bit through his thumb as she dragged his hands off his face. Chandrabahadur rolled back on his front, grimly holding his mauled hands to his face. The bear clawed him over a second time. She swiped Chandrabahadur's hands away and with a further blow performed the disastrous stroke that was to tax all my ingenuity to repair; clawing away half his nose, the middle of his upper lip, as well as mutilating his cheek. It is wonderful how nature protects the eyes by the buttress of bone all round. Chandrabahadur, by tightly screwing up his eyes, was able to save his vision, for the claws simply rode over from his forehead to his cheek. Blood was everywhere. I think the bear must have believed she had killed him.

At last the police inspector arrived on the scene, having heard Chandrabahadur's pitiful screams. He remained, however, on the safe side of the wall. He fired his gun in the air and the bear left Chandrabahadur and returned to her baby. By now Chandrabahadur, his face a mass of blood, could only just see through his left eye. He reached for his useless gun and searched around for his fountain-pen, of all things, that he had lost in the battle! Having found it, he climbed up the wall with the help of the sugar-cane. How he ever managed this, he was unable to tell me. He fell over the wall to safety, and the inspector helped him back to Chainpur. He was taken to the little mission hospital there where the doctor did his best before sending Chandrabahadur to the B.M.H.

When Chandrabahadur arrived at the B.M.H., having been carried in a basket, or *dhakar*, for four days, his face was truly in a ghastly state. The bear's claws must have been grossly contaminated as the wounds were now very septic. Even so, some had actually healed and his back, a mass of claw marks, looked as if it would heal in a few days. My first problem was to clear up the sepsis and so we removed all the sutures, as the presence of foreign material prolongs infection. I gave a sample of the pus



## *Animal Section*

to my laboratory sergeant to grow, in order to determine what the germ was and which drug would be best suited to fight the infection. The result came back as proteus, a nasty bacteria which can only be killed by a limited number of drugs, themselves often so toxic to the body that they can make the patient quite ill. Finally, however, Chandrabahadur's face was clean enough for surgery. First I repaired his lip and eyelid, but he was not as good a patient as brave a man. Every five minutes, the sister found him poking his finger under his bandages. In spite of this the lip healed but the eyelid broke down. I then decided to suture his upper to his lower eyelid to splint the two together while his lower eyelid healed, but he kept rubbing his eye until it broke down again.

I decided that he, like Narmaya, needed a rest from surgery; he had been through too much trauma in too short a period. His tissues needed time to recover their blood supply so that they would be strong enough for future surgery. A month later I saw Chandrabahadur at my out-patients; much of what I saw was very gratifying, the rest was rather depressing. As the lip had healed so it had been pulled until it looked like a bad hare-lip deformity. This had, however, had one big advantage: the large area of deficient flesh on the right side of his nose had filled in amazingly. His thumb had healed perfectly, so had all the deep claw marks on his back. From the scars I saw clearly how the bear had stood on Chandrabahadur's back with all four claws digging deeply into the flesh. I had to leave him at this stage, my time in Nepal was nearly over. I dearly wished I could have brought him back to East Grinstead with Narmaya.

One of the main attractions at the Headquarters, Royal Army Medical Corps, Officers' Mess, London, used to be a stuffed Himalayan bear. This ferocious-looking animal spent many years holding a tray just inside the main entrance of the building which is, incidentally, next door to the Tate Gallery. I had lived a couple of years in this Mess and during that time had grown very fond of the old bear.

Now bears are dangerous animals, dead or alive. Rumour has it that, on one Mess night, one very senior, inebriated officer

## *Bhalu and the Police*

climbed upon the bear's back, only for them both to fall crashing to the ground, the officer breaking his femur. The poor bear was subsequently banished into the underground passages somewhere under the Mess. Little did I realise at this time, that a similar bear would be setting me problems that would make a plastic surgeon shudder.

When I returned to the R.A.M.C. Mess, after my two years in Nepal, I naturally enquired after the bear. The waiters told me how one night, he, the bear, had ended up at three in the morning in the middle of Vauxhall Bridge. Apparently a passing taxi driver nearly had a fit. All too often the bear would end the evening sharing the bedroom with a rather too inebriated doctor. His further antics had resulted in his final banishment to the R.A.M.C. museum at Mytchett. It was finally decided, wisely if not sadly, that the bear would probably survive longer in the museum. I missed Bhalu the bear, especially after Nepal.

## Bhag the Tiger

It was still quite light at nearly 7 p.m. one June evening when Solubir went into the forest to collect his seventeen cows, which he had left grazing all day on any grass they could find and on the more plentiful green leaves of the trees and bushes.

When he arrived at the place where he had left the cattle, there were none in sight. The next thing he knew was that a tiger was leaping for his neck. He threw up his left arm to protect himself and the tiger's jaws closed with a sickening crunch into his forearm. The tiger momentarily let go, only for his teeth to close again, this time on Solubir's wrist. As the old farmer crashed to the ground, under the enormous weight of the beast, he swung up his rifle which exploded near the tiger's flank. The startled tiger disappeared rapidly into the jungle, leaving a thin trail of blood.

It is unusual for tigers to kill domesticated animals such as cows, buffalo or goats, but sometimes circumstances force them to, in order to keep alive. One of the commonest reasons why a tiger might change from his natural prey is a previous encounter with a gun. Sometimes a near-miss may have resulted in part of the tiger's jaw being shot away, making his teeth useless for killing with. The tiger may also have been maimed, again the result of a gunshot wound or even the result of an encounter with a porcupine. The vicious quills of this animal may penetrate deep into the tiger's paw where they snap off leaving several inches of quill behind. If the quill has become bent over, it may be impossible for the tiger to get it out with its teeth. This results in a chronic bone infection, called osteomyelitis, which will never clear up so long as the foreign body remains in the paw. The tiger is doomed to a life of pain, with every step agony. In these circumstances the

## *Bhag the Tiger*

tiger is unable to catch his normal prey and must resort to cattle or even man.

The farmer had no idea what had happened to this particular tiger in the past but what he did know was that it had been killing animals nearby for a long time, certainly more than a year; this was why he had been carrying a gun. It had already killed three cows in nearby villages during that month.

He told me that he had felt no sensation of pain at the time and, like a soldier shot in war, the fear of his ghastly encounter had superseded the agony of his bones being splintered.

As the tiger fled, the farmer rose unsteadily to his feet and there, not ten yards from him amongst the low bushes, was one of his prime cows; the tiger had been tearing away at the underbelly and had not even bothered to carry it away. A fully grown tiger is immensely strong and can carry a full grown cow many yards, not even leaving a drag mark.

Near to the spot, where the farmer had been attacked, was a hot spring; these are similar to the hot springs of Iceland, New Zealand and even Bath. I never visited this part of Nepal but I have been on an expedition to central Iceland and explored the springs there and these contain a lot of sulphur.

The farmer plunged his arm into the hot spring several times a day and it is possible that the sulphur in this near-boiling water cleansed his wounds sufficiently to stop infection. He was lucky he did not develop tetanus from the bites.

Having immersed his arm in this hot water and thus cleaned away all the blood, he found three tendons hanging out through the upper of the wounds. He also found the tendon to the back of his thumb hanging out from a hole at the base of his thumb. He actually described these to me as nerves and, completely undaunted, assuming that they could now be of little use to him, he simply cut them off with a pair of scissors! This made all subsequent surgery fantastically difficult. Four times a day he religiously visited the hot spring. Some days later three pieces of bone came out of his wrist following this treatment with the *tato pani* (hot water).

Gradually the forearm healed up but his wrist continued to fester.

## *Animal Section*

About this time, one of the British Gurkha officers was trekking in this part of Nepal. Now, most villagers have faith in the power of white men to cure their ills and consider all Nepalese-speaking British Gurkha officers to be doctors. True enough, Solubir asked the officer for medicine for his sores, but the officer immediately realised that this was not something that could be cured with a couple of aspirin and gave him sixty rupees to get to the M.R.S. at Paklihawa. But still his wound refused to heal. From there he was sent by train across north India to Dharan. Weeks later, when the same British officer visited the old farmer in the ward, he was most embarrassed when Solubir leapt on top of his bed shouting the praises of the officer to the whole ward! 'LOOK THIS IS THE MAN WHO HAS SAVED MY ARM!' Never had £3 been better spent.

I subsequently learned from this officer a different story of how Solubir got his wounds.

The farmer and his son, a Gurkha sergeant on leave, had been hunting a leopard which had been raiding the local farms. They had wounded it and seen it slink away into a cave, apparently to die, as it had left a thick trail of blood. The young sergeant had suggested to the farmer that he should go in and investigate, while the soldier covered him. This the foolish man did, armed only with an axe. The leopard was still very much alive and had leapt at Solubir who dropped his axe as he crashed to the ground with the leopard's teeth buried in his arm. He beat away at the leopard's face with his fist, the sergeant being powerless to help at all or he would have killed them both. The leopard let go and bit him again but this time Solubir managed to pick up the axe and hacked away at the leopard's face with all the strength of a doomed man. Faced by this assault, the leopard let go and Solubir managed to escape.

The two intrepid hunters had been using a *bandur*, an old-fashioned muzzle-loading gun, which was also used at wedding ceremonies. I have no idea whether they have 'shot-gun weddings' in Nepal!

I never did find out what happened to the leopard or tiger. I did learn, however, how difficult it is to get a true and accurate

## *Bhag the Tiger*

history from the Nepalese. It was not that they necessarily wanted to deceive me but, I think, to give me the story they thought I wanted to hear.

When I saw Solubir he had a useless, stiff hand with only a little movement in his outer three fingers. His vital index finger and thumb were completely rigid. In addition he had a festering sore at the base of his thumb, in what we doctors call the anatomical snuff-box. If the thumb is pulled back, a little hollow appears where the thumb joins the wrist. This hollow is bordered by tendons and used to be used for taking snuff.

An X-ray revealed that it was the scaphoid that was the cause of much of his trouble. This little bone lies deeply in the anatomical snuff-box and derives its name from the Greek description of a boat. The tiger's teeth had broken the scaphoid through its waist. The blood supply to one portion had been completely cut off and this part of the bone had died. The piece of dead bone is called a sequestrum. This acts as a foreign body and as long as it remained, his wrist would never heal but continue to fester while the wrist joint remained stiff and useless.

As soon as the farmer came into hospital, we explained to him how vital it was to start trying to move his stiff and useless fingers.

We took Solubir to the theatre, anaesthetised him and manipulated his stiff fingers; we then applied a tourniquet and very easily removed the piece of dead bone from his wrist. All I then had to do was to curette out the remainder of the infection and fill the cavity with an antiseptic called Physohex. We did not use any sutures as these would only have locked up infection in his wrist.

Next day I gave him an old tennis ball and told him to keep squeezing this all day long. This he did and I never entered the ward without seeing the tennis ball in his hand. It is always a joy to treat a patient who tries hard to help himself. A week later we removed his dressings. Now, for the first time since the tiger had attacked him, his wound was healing.

Solubir left hospital, after three weeks, clutching his old tennis ball. Already he no longer required any dressing; his swollen fingers had settled, as he had worn a sling most of the time in

## *Animal Section*

hospital. As I tested his grip, I had quite a struggle to remove the tennis ball from his hand; his power was now fairly substantial.

He left a very happy man. We, for our part, were sorry to see him go.

## Chituwa the Leopard

‘That *bhag* practically kissed me! His head was enormous,’ were the first words that Lachimadevi croaked at me, as she sat slumped in the chair by my desk. She had cruel, deep, vicious wounds on her head, while congealed blood coated her face.

The attack had occurred some eighteen hours earlier, yet the blood was still untouched. Lachimadevi had been looking after her thirteen cows, in a forest clearing, near the Kosi river. The place was called Chattraghati. As she had no children, Lachimadevi had to look after her cattle herself; her husband, Churamani, was out working in the fields a long way away.

She had remembered noticing a particularly foul smell as she had been minding the cows but had not realised until far too late its significance. She thought at first it was due to a *chuchendra*, a form of rat.

It was then about 1 p.m. and she started walking along a shrub-covered mound, to check that none of her cattle had strayed. She pushed aside the bushes with a stick which she held in her hand. By now the stench had become really oppressive. She heard a rustling in the bushes just to her left. She stopped, turned, and that very second an enormous leopard leapt straight towards her.

Even then, she had still not realised what it was until the leopard’s face had been literally only inches from her own. She swore to me that it had actually brushed her face as it had leapt clean over her, striking, with its shoulder, her raised fist and stick. The leopard had then disappeared into the jungle. During its bound, its claws had ripped open the flesh of Lachimadevi’s scalp in four different places. Although severe bleeding had occurred, she had not fainted. She had been so dazed by the experience that she hadn’t even screamed. There had been other women, looking after their own cattle, not very far away.



## *Animal Section*

In spite of her terrifying encounter, she first rounded up the cattle, before returning home, where she found her neighbour, Devi. (It was at this stage of her story that Udai Sing killed a huge bug that was crawling over Devi's clothing.)

Devi had gone out to search for the men but they were so far away in the fields that she had been unable to locate them. The two women had had to wait until nightfall before the men returned, as no porters were available to take them to the B.M.H. It was nearly midnight before the men started off for the hospital. During the previous few hours they had rested a while and eaten, for there was a long journey in front of them. They had also made enquiries to see if anyone else had seen the leopard. It turned out that some two months earlier, a large leopard had snatched a fully-grown bullock as it had been pulling a cart and had disappeared into the jungle without leaving a drag mark. Now, the owner of the bullock cart possessed a home-made shotgun. The following day he searched the jungle diligently until he had found the remains of the kill. He climbed a nearby tree. At dusk the leopard had returned to the kill but the villager had only succeeded in peppering the leopard's rear.

Since then the leopard had been sighted in the vicinity, although the bullock had been his only known domestic kill. It was possible that he had been after one of Lachimadevi's cows that afternoon, but it was more likely that he had simply been sleeping peacefully amongst the bushes until rudely awakened by Lachimadevi, smashing her way through the undergrowth. He may well have been as frightened as she was. Leopards rarely make a kill in the middle of the day, especially in the heat and humidity of the monsoon season. This incident had occurred at the beginning of September.

Now although Lachimadevi lived about three miles from the Kosi project railway, no train was due to leave for Dharan for at least twenty-four hours. After a lot of negotiating, one of the men hired a railway truck from the foreman at the cost of five rupees per passenger; there were to be three passengers in all. At midnight, four men started to push the truck down the line. Unfortunately they didn't have one of those trucks that can be worked

## *Chitwa the Leopard*

by two men on a leverage basis. The truck simply had to be pushed many miles until they reached the end of the line at Ghope village. In addition to the fatigue caused by this exertion, was the constant worry that the leopard might still be in the nearby jungle. At the village they collapsed into an exhausted sleep, until woken up two hours later by Lachimadevi who had never slept a wink, even though she was lying wrapped in a blanket on the floor of the truck.

Udai Sing rang me at half past six that Sunday morning with: 'I know you are not on duty but I have a very interesting case here.' I came over at once. It is not altogether safe to suture wounds that are more than a few hours old, as bacteria may well be bottled up by the stitches. I was, however, prepared to stitch these wounds at any time because the face and scalp have such a wonderful blood supply. I was glad I did with Lachimadevi as the sutures prevented further blood loss. The wounds were so deep that the skull was shining white for several inches through each of the savage claw marks. Leopards are filthy animals and often have decaying flesh between and under their claws from a previous kill. Apart from trying to kill the germs that must have got in through the claws, and giving Lachimadevi an anti-tetanus injection, there was nothing else I could do, except build her up again after her severe haemorrhage with iron and vitamins. She was lucky, her wounds healed perfectly. She returned to her village and the cows. When I last heard from the village of Chatraghati, nothing further had been seen of the *chitwa*.

## Snakes

Snakes have always had a morbid fascination for me so that I can listen for hours to stories about them, yet I am really quite terrified of them; to me all snakes are sinister. In Nepal, the most dreaded snake is the king cobra, or hamadryad, a bite from which will kill a man in twenty minutes. I saw my first king cobra being carried into the hospital by a five-year-old boy. It was very much alive. The boy had found a nest of these snakes outside the main gates of the cantonment. He had snared the snake round its neck with a piece of string and had brought it up triumphantly to the dispensary at the B.M.H., where he knew we kept a collection of dead snakes in glass containers. Though only a baby cobra, he had still trapped it with only the string and his bare hands. I felt sickened at the thought for, if it had bitten him, he would have surely died. Still, his little king cobra did get its place in the hospital collection.

Ranjit Rai that same summer had been walking along the single railway line which runs from the little village of Ghope to the banks of the Kosi river. At one place there is a steep drop on each side of the railway, so that this particular section of the track is not washed away by the monsoon. He had been hunting and was walking home with an empty bag, his gun broken and his cartridges in his pocket. Suddenly he heard a sound like a swarm of bees and leapt back startled. To his horror he saw the biggest hamadryad ever reported in this part of Nepal, fifteen feet long and now reared nine feet in the air. Its hood was at least a foot in width and although its neck only appeared to have the same thickness as a man's wrist, the body was the diameter of a man's thigh. Ranjit stood mesmerised as the cobra swayed and appeared to hum in front of him. The king cobra, unlike all other snakes, will not necessarily flee at the sight of man but may actually

## *Snakes*

attack. Slowly Ranjit recovered his wits, loaded his gun and shot the snake through its neck. It had been a nasty few minutes.

The onset of the monsoon coincides with the appearance of snakes, which are flooded out of their holes in the ground by the torrential rains. Snakes, which mostly come out at night, are drawn to light, partly as their natural prey, the frog, is hunting the insects that abound there. I never walked across the grass at night unless in a frantic hurry to get to the hospital. In this event I used to beat the ground in front of me with my umbrella to set up vibrations to frighten away the snakes. If I didn't have my umbrella, I used to walk slowly, stamping my foot at each step. So, whenever I was called at night, I first put on sensible shoes, collected my umbrella and torch before even picking up my stethoscope.

The cantonment was a great deal safer in 1967 than in 1960, when the area had only recently been reclaimed from the forest and snakes and rats were in abundance. Every year men were detailed as rat-catchers to push poison down any suspicious holes before blocking them up. This measure had also reduced the snake population drastically.

The Nepalese hill people are even more terrified of snakes than I am as they believe that all snakes are poisonous. This is in fact far from the truth. The only treatment they know is the immediate application of several tourniquets, usually using thick string-like grass that is bound so tightly around the limb that the grass cuts into the flesh. They then travel posthaste to the nearest medical aid, be it witch doctor or hospital. Having applied the tourniquet, the limb gets no further attention! The tourniquets seem neither to be checked to see if they have loosened, nor slackened when too tight or left on too long. We have had people arrive in this hospital who have travelled thirteen days with such a neglected tourniquet, with a resulting black gangrenous or even mummified limb, which has practically fallen off at the level of the tourniquet. Several amputations have had to be performed at the B.M.H. for gangrene from this cause. Usually, however, the tourniquet has slipped somewhat and some blood at least has reached the bitten limb so that, even though a tourniquet may have been on several hours or days, no lasting damage need necessarily have occurred.

## *Animal Section*

The ideal treatment of snake bites is like the ideal treatment of anything, prophylactic. As bites occur so commonly at night, sensible footwear should always be worn. In addition, if long trousers are worn by the men and saris by the women then, should a snake be disturbed so that it strikes, some of the venom will be spent on the clothing.

Incidentally, to digress for a moment, one reason why snake-charmers can use deadly cobras for their entertaining is because they first make the cobra strike two or three times at their sleeves to empty their poison sacs. They also milk the poison sacs daily. Over the years these men become practically immune to the poison, having suffered repeated sub-clinical doses of venom. Many snake-charmers actually cut out the poison sacs from their cobras, though these sacs can grow again and for this reason this operation has to be repeatedly performed. Interestingly, snakes are probably indifferent to the music that the charmer plays. They sway simply to the movement of the flute.

Very few villagers wear any form of footwear and, even if they are educated enough to realise the value of adequate cover, they probably couldn't afford decent shoes anyway. To many Nepalese, shoes are both cumbersome and unnecessary, as the soles of their feet are hard and corny.

I have taught my staff to treat snake bites as they might a broken limb. As soon as anyone has been bitten, he should lie down immediately because, by running, the poison will be rapidly dispersed throughout the body with the most dire consequences. Next a tourniquet should be applied very tightly just above the bite, with a second one just above the knee or elbow. The unlucky person should then be carried to the hospital. If there is no hospital available, the tourniquets must be released for five minutes in every hour to allow the circulation to return temporarily to the limb to prevent the onset of gangrene but not too long to allow too much venom to escape into the general circulation. The tourniquets should then be reapplied. This procedure should be repeated several times until all the venom has been allowed to slowly escape.

I do not personally believe that incising the area of the bite

## *Snakes*

and then sucking out the poison does any good, as snake venom diffuses very rapidly from the bite, so that little can come out through the incision. I have however tried this method of treatment with near-fatal results. I was the surgeon, at that time, in Kaduna, Northern Nigeria. One night a very distressed woman arrived crying that, while she had been collecting wood outside her house, she had been bitten by a 'black' snake. (They were always reported to me as 'black' snakes in Nigeria, so this was little help in the identification.) This was the first snake bite I had ever dealt with so, remembering what I had read in my books, I boldly incised the area, administered anti-snake serum and went to bed. At 1 a.m. the Q.A.R.A.N.C. sister rang me up to say that the foot was bleeding. I told her to raise the bottom of the bed so that gravity would reduce the blood flow to the limb. An hour later the sister rang again, to tell me that the patient was still bleeding. I told her to put a second crêpe bandage on top of the one I had already applied and to elevate the leg still further. That, I remember telling her, would stop any haemorrhage. Half-an-hour later she rang again; the leg was still bleeding. I immediately ordered some pethidine to sedate the patient and thus reduce her blood pressure to help arrest the haemorrhage. This time I got up to see exactly what all the fuss was about. Not only were the dressings soaked in blood but also the sheet and mattress. I have never once, since that night, remained in bed longer than a second after being informed that a patient was bleeding! As I examined the woman at 2.30 a.m. I noticed at once that she had all the signs of shock. Her pulse was rapid and feeble, her blood pressure was low and she was pale. Pallor is obvious even in the most pigmented people once one is used to working with them. The finger-nails and palms provide the main clues. In addition, this girl was restless and sweating profusely. I noticed that she was also bleeding from the site of the pethidine injection and from the vein in her arm where I had injected the anti-snake serum, as well as from her foot. She had also been coughing up blood. I realised at once that she had been bitten by a snake belonging to the viper family and that her blood could no longer clot. Her condition was as serious as that of a bleeding haemophiliac. Fortunately we had

## *Animal Section*

some fresh blood in the hospital, which I had collected only that afternoon in readiness for a major operation next morning. Luckily, the blood was the same group as, and compatible with, this woman's blood. This fresh blood with its natural clotting agents, together with some intravenous hydrocortisone, undoubtedly saved the girl's life, though I still had some anxious moments as all her veins had collapsed. I had to risk still further haemorrhage in making yet another cut, this time on the other leg, to dissect out a vein for the transfusion. She left hospital four days later, perfectly well and a most grateful patient. I was grateful to her in return; she had taught me not only the dangers of incising snake bites but the even greater danger of not getting out of bed immediately I was called.

It is a very great help if the snake can be identified but only seldom is the offending snake brought with the victim. Descriptions are clouded by fear, superstition and exaggeration. As often as not there was no snake at all.

Once, when discussing snake bites with the Nepalese doctor at the little ten-bed hospital in the bazaar, he told me that frogs were the commonest reason why people thought they had been bitten by a snake.

'But surely frogs don't bite?' I naïvely queried. It wasn't April Fools' Day either! He was perfectly serious. He reminded me how frogs are attracted by light, so that, in the bazaar, they were attracted by the hurricane lamps in the houses. Many of the houses in the town are built simply on the ground, although the majority of the houses in the fields and outlying villages are built on stilts. The villagers either sleep on the floor or on very low beds, and frogs frequently jump on to the face or hands of the sleeping person, who wakes with a start, thinking he has been bitten by a snake. Rats are also very common in the houses so that rat bites and snake bites may be impossible to differentiate at night. Finally, because of the poor illumination in the houses, even walking around can be hazardous and it is easy for a villager to become impaled on a sharp piece of wood or wire and think that it was a snake. It doesn't take much to make a snake-fearing people expect the worst.

## *Snakes*

The Nagar Panchi (the municipality) in Dharan take the snake problem very seriously. They offer five rupees for every adult cobra that is brought to them and two and a half rupees for a small or baby cobra. They then cut off the tail of the snake before returning it to the catcher for disposal. They do this in case he should bring the same snake back another day to claim a second reward. Five rupees is a day's wages to those lucky enough to have a job at all.

When I am certain that the bite is from a poisonous snake, either from an accurate description of the snake or from the onset of the symptoms of poisoning, then I will give the anti-snake serum. First I give an injection of hydrocortisone, for this drug helps to combat the falling blood pressure resulting from the bite. Most important, however, the cortisone helps to counteract the very dangerous effects of the serum itself. The injection of this anti-snake serum must be given very slowly and such large quantities may have to be given to neutralise a really severe cobra bite, that it is often safer given as a transfusion when it can be suitably diluted. Ten minutes later all the tourniquets are released for a period of five minutes but the limb is kept absolutely still during this interval, so that as little as possible of the toxin is released. The tourniquets are then reapplied and the patient carefully observed. Further anti-snake serum is given immediately any signs of toxicity recur. If there are no symptoms the patient is simply observed overnight in hospital. Nearly everyone who arrived alive at the B.M.H. survived. The most serious bites resulted in death long before the victims ever reached the hospital.

It was not only the actual snake bites that caused trouble. One poor man, who had climbed a tree to cut wood with his axe, caught sight of a cobra on the same bough. A split second later he had practically amputated his little finger as he had only spotted the cobra on the downward stroke of the axe!

The rainy season from June to September transforms the parched earth into a fertile land. By December the vegetation is no longer lush and an 'army' of grass-cutters from the very old to the tiny tots are busy cutting any green grass they can find to



## *Animal Section*



feed their cattle and goats during this lean season. Meanwhile, the men climb trees and cut down branches full of leaves for the same purpose. Many of these grass-cutters were attracted to the cantonment by the lush green grass that grew along the banks of the monsoon drains, which take the waste water from the houses, down into the forest. Grass also grew more plentifully in the private gardens for these were watered twice a day so long as the water supply permitted. Naturally, this was all quite new to me when I came to Nepal so that I was more than a little surprised to find three old women industriously cutting grass with hand sickles in my garden, the day after I arrived. These women soon learned about the miracles of the machine age and what a wonderful timesaver the rotary mower could be to them. Wherever the cantonment grass-cutters went, these women followed, quickly recovering the cut grass. They had soon got over their original

## *Snakes*

amazement over these machines and got down to the practicalities of grass collection.

Grass cutting is not without its dangers as Bhagtimaya found to her cost. This forty-year-old woman had grabbed hold of the neck of a very thick, five-foot long, green snake when she had reached out towards what she thought was a tuft of grass. I had assumed, uncharitably, that she had probably been talking too much at that moment and not concentrating enough on her work. The snake, which had been coiled up tight and soundly asleep at the time, was particularly annoyed at his rude awakening and promptly bit her right wrist. She had the classical marks of the fangs: two round puncture marks half an inch apart on one side and a single fang mark on the other side of her wrist. It had obviously been a pretty big snake. Immediately, her fellow grass-cutters applied three tourniquets with strong pieces of grass at different levels up her arm. They went to the witch doctor who wiped the arm with herbs. Incidentally, as seems to be the custom in India and Nepal, when dealing with snake bites, he made no charge for his services. The tourniquets remained on until the third day when her relatives actually replaced the old grass with new before bringing Bhagtimaya to the B.M.H.

On her arrival, the arm was in a dreadful state, being grossly swollen, blistered and infected. The grass had cut deep into her sodden flesh and the marks of the old tourniquets were obvious by the deep circumferential ulcers around her arm. We immediately cut off the last of the tourniquets and found to our relief that she could still move her fingers. Fortunately, the original tourniquets must have slipped so that they no longer occluded the arteries. The arm could be saved. A sling worked wonders. It allowed the fluid which had been dammed up by the tourniquets to disperse from the swollen arm into the rest of her body. However, as the feeling came back into the arm, even the contact of the cloth sling against her raw flesh was too much for her. Bhagtimaya, therefore, used to walk round the ward holding up her bad arm at the wrist with her good hand. She put up with this most uncomfortable posture for over a week. We treated her arm as we would a severe burn, by exposure to the healing powers of

## *Animal Section*

the sun. This encouraged her sores to scab over. We forced her to exercise her stiff and swollen joints. The infection soon cleared up with the help of penicillin and the raw areas dried in a matter of a few days, helped by the antibiotic spray, polybactrin.

I later noticed that she had a severe cataract in her right eye. It was then that I realised that she had grabbed the snake only because she couldn't see properly through this partially blind eye. A person with normal vision could not have made a similar mistake. I had been wrong in my assumption that she had been talking too much! She went home a week later, her arm practically healed and a very happy woman.

It was quite light, early in the morning in June, when twenty-two-year-old Chija had got up at about half past four to visit the 'latrine' in her garden. This usually meant simply performing on the ground away from the house before the others woke up. The Nepalese women are, not surprisingly, very modest about such actions, but not so the little children and a lot of their menfolk. Whenever I was walking out, I used to see little bare bottoms squatting on the ground, their owners oblivious to the outside world. Likewise, as I walked along the banks of the Kosi river, or along any side-track off the main track on routes through the hills, I would come across men engrossed in the same act, a great deal less concerned about the interruption than I was!

After Chija had relieved herself, she decided to wash the dirty dishes from the previous night's meal. It was fairly cool at 5 o'clock, and being the monsoon season, she could never be sure how long it would remain dry enough to work outside, nor did she know how soon her year-old daughter would wake up and demand her feed. She was gaily singing to herself and had got halfway through her chores when suddenly she felt a terrible, savage burning pain in her left foot. She looked down and to her horror, saw that a cobra had fixed its fangs deeply in the outside of her foot. She saw only part of the snake, as not much more than its head and neck had emerged from a hole in the ground amongst the pots. Having bitten her, it immediately withdrew into its hole. She had, at once, recognised the sinister hood and the V-shaped marking on its head. She knew that, without treatment, she would

## Snakes



surely die. Chija took a step backwards and let out a piercing scream. Paralysed with terror, she stood rooted to the spot. It was this immobility that may have saved her life. By her keeping so still, the poison had not travelled too quickly throughout her body. Her husband, followed by his two brothers and his sister-in-law, rushed out of the house. Within seconds three tourniquets had been applied tightly above the bite. The poison was now at least contained. Her relatives immediately recognised the tell-tale blood on the ground and the puncture marks on her foot—two, half an inch apart and another, an inch away, the result of a really effective bite. They were dismayed.

Then Chija panicked. The mortal danger that she was in caused her to run as fast as she had ever run before in her life, to the only place she knew would cure her, the hospital. She ran non-stop for two miles before collapsing at the door of the tiny government hospital in Dharan. It was now half past five. The doctor left his bed at once to examine Chija. At first he couldn't believe that she had really been bitten. However, by this time, Chija started feeling awful, for, as she had run, the tourniquets had loosened and the venom had flooded into her circulation. She remembered feeling as if she had fallen into a bed of stinging nettles. A frightening burning pain had engulfed her whole body. Then her vision rapidly began to wane.

Now the doctor believed her. He immediately applied his own

## *Animal Section*

tourniquets, removing the now useless loose ones. The doctor could not risk further poison being released from the bitten foot. Next he cut deeply into the bitten area, in an attempt to rid as much as possible of the venom, but already Chija's condition had become critical. She found her mouth filling up with saliva which she could not swallow. Next she couldn't even hold up her head, and her sight had completely gone. Then she collapsed into terrifying unconsciousness. Her relatives—who had since arrived, panting—were clustered around. Had she died?

The doctor inserted a needle into one of her veins. Very slowly he injected the anti-snake serum. He had to inject four ampoules before, some half an hour later, she began to regain consciousness. Still she couldn't see. Gradually, during the next thirty minutes, he had to administer several more ampoules of the serum until at last her sight returned. Chija remembered none of this, though her relatives looked on, spellbound. By midday, the doctor considered that Chija was fit enough to return home. He had the same desperate bed shortage as we had at the B.M.H. He had made no charge, which was very generous of him, considering that he had undoubtedly saved her life, at a most inconvenient hour of the day. It is true that he was a government employed doctor but his pay was a mere £25 a month and he was dependent on the fees he had to charge for his livelihood. He did, however, warn Chija's relatives that, if they brought her back, then they would have to pay for any further treatment. This was an effective way to dissuade any unnecessary calls.

At 7 o'clock that night Chija arrived at the B.M.H., learning that there she could get free treatment. She was still a desperately worried young woman.

'I request you, Doctor Sahib,' she implored me, 'make my leg better.'

Her life was no longer in danger but that did not mean that she was not still very ill indeed. Her temperature was 102.4°F. As she looked at me, she saw thousands of stars, as we have all probably experienced after a heavy blow on the head. In addition, the room appeared to be spinning round and round. Her left leg was grossly swollen right up to her knee. A dirty bandage had been wrapped

## *Snakes*

around her foot at the place where the snake had bitten her and where it had later been incised. Above the bandage a piece of loose grass had been tied around her ankle. I couldn't think what it was there for. It was far too loose to be a tourniquet and anyway, certainly not strong enough.

'Why the grass?' I asked her father, for it had been he who had tied it round her leg.

Although apparently only an ordinary piece of grass it had a very special significance, for so long as she wore the grass round her leg, she was protected from the witches. Even if a witch did see her leg, Chija could not be harmed further; without the grass, however, she was in mortal danger. This was typical of the superstitions that many of my patients believed in.

We had to put up an extra bed in the families ward to accommodate Chija, as she badly needed help. As soon as she was in the safety and security of the ward she was able to relax a little, knowing that her leg would be saved. I gave the nursing staff strict instructions that the piece of grass should not be touched. Who was I to interfere with her lifelong beliefs? We placed her swollen leg on top of two pillows to encourage the swelling to disperse by the help of gravity. We gave her a drug called phenergan to counteract some of the allergic complications of the bite and thus help disperse the fluid. It also acted as a sedative to give her some much needed sleep. We gave her penicillin to stop infection developing in her swollen leg and finally anti-tetanus serum. We didn't want to save her from the snake bite only for her to die of tetanus!

By next day she felt so much better that we were able to send her home.

'Is it safe for me to feed my baby?' she asked me, as she was leaving the ward. 'The doctor in Dharan told me not to.'

The doctor had obviously been worried at the possibility of poison being secreted out in her milk. I looked at her chest; her breasts were painful and distended, her baby hadn't been fed for about thirty-six hours. They both needed relief from their different plights.

'Yes,' I said, thinking desperately hard as I spoke. My mind

## *Animal Section*

was racing. Would it really be completely safe? Then I remembered that one of the ways of dealing with a snake bite is to incise the area and suck out the poison. Swallowed poison does no harm, although I personally would spit it out each time I had to suck the wound.

I had not seen the last of poor Chija. Two days later she returned. Her leg had swollen up again and was now obviously infected; she needed further penicillin. Every day I sent the ambulance to her home to collect her to save her from using her poor leg as much as possible. Every day we dressed the leg and continued the penicillin but still the foot would not settle. Finally, I had to operate on her foot for the cobra bite is not only toxic to the nervous tissue of the whole body, but also causes local gangrene. It was this gangrenous tissue that I had to remove. Some weeks later I had to take away further dead tissue before the foot finally healed up and she was able to run again. She never failed to salute me with a most grateful *namaste* whenever she saw me. Her baby flourished.

My experiences with snake bites were not always so serious and dramatic but once even decidedly amusing. One evening I was called away from a dinner party to see an old lady who had just been bitten by a snake. Half an hour earlier she had been cutting grass about fifty yards from her house. It was then a quarter past seven and quite dark. She hadn't seen the snake but had felt a sharp pain in one of her toes. She rushed into the house where her husband tied a piece of red cotton tightly round the toe. She was then carried posthaste to hospital. Hemlata had removed the original tourniquet in reception and had applied a rubber tourniquet round her thigh. I really should add 'tried to' for, not only is Hemlata so frail, but she was expecting a baby in four weeks time. After ineffectually puffing and pulling for a few minutes in her efforts to put on a strong tourniquet, she gave up the unequal struggle, momentarily left reception to look for the first man she could find. This turned out to be the *dhobi* or washerman. His efforts were about as good as one would have expected! When I arrived in the middle of this comedy of errors, at least the anti-snake serum was all ready for me to inject. However, the old

## Snakes

lady looked so well that I decided to wait and see how she fared. I realised that, as she had run into the house, much of the venom would have been pumped into her circulation, and if any had still been present in the region of the bite, the dhobi's 'tourniquet' could hardly have contained it at all. So, at least, we released this tourniquet! As I carefully watched her, I asked the old lady to tell me more about the accident. She was so vague with her answers that I thought it more expedient to question her husband.

'Where is your husband?' I asked her. He was in fact just outside reception, being very shy and feeling, quite rightly, that he could be of little help. The old lady, calling him a silly goat, beckoned him inside where he helped us with the story. I did, however, reprimand her for calling him an old goat (*bakra*). At this stage Hemlata drew my attention to the foot. Two fang marks were now clearly visible on the third toe. The toe had not, however, swollen, although the old lady complained of burning and soreness in the foot generally. The amusing thing was that the marks of the tourniquet were on the second toe! In the half light of the hurricane lamp, the old lady had instructed her husband to put the tourniquet round the wrong toe.

'Surely you are now the silly goat!' I said to the woman.

'Dwi (two) silly goats!' shrilled Hemlata and at that both Hemlata and the old man convulsed with laughter, followed soon after by the old lady.

Hemlata's sense of humour and her ability to set the more anxious patient at his ease reminded me once more of her great asset to the B.M.H. A few moments earlier the old lady had thought she was dying, now she was laughing! They both realised at once that, having applied the tourniquet to the wrong toe, and as she was still alive, then she could no longer be in much danger. I simply prescribed a sedative, put her on a trolley and wheeled her up to the ward, while her husband went home happily, perhaps, I thought wryly, to mind their other goats! The old lady joined him at home next day, none the worse for her adventures. I was also happy; I had only missed thirty minutes of my dinner party and, as a bonus, I had the little piece of red cotton to entertain my fellow guests with.



## *Animal Section*

Finally, a note on local cures. Some Nepalese claim that wizards can cure snake bites with the aid of three cowrie shells. The wizard first throws all three shells towards the place where the snake was last seen. Two shells miraculously return to his hand. The third sticks to the back of the particular snake's head. This snake then bites the victim for a second time, in the same place as before. But this time, because of the presence of the magic cowrie shell, the snake extracts the poison instead of inserting it. . . . The wizard then recalls the snake and places its head in a jar of milk. The snake now vomits back the medicine and dies. The man recovers. I cannot claim to have witnessed such an event. I never saw a wizard.

There is, however, a certain Indian tribe of the lowest caste, the sweeper, from which a few men, the Lal Bhezi, have inherited the skill, so it is claimed, to cure a person who has been bitten by a snake. My out-patients' nurse, Hemlata, witnessed such an event in her home village in Tibet. An Indian owned a sweet-shop. He too never accepted any reward for his snake bite cures. Should he once charge, then the gods would desert him and he would lose these skills.

One day a man arrived in great distress. He had just been bitten by a snake. Hemlata had been buying sweets at the time. The shopkeeper gave the victim raw onions to consume, which he did at once. The man was then instructed to go home and to rest and to return just before dawn. Hemlata was intrigued; she also turned up at that time. The man was still alive.

The Indian now sat, cross-legged, on the floor, some feet from the distressed victim. While continuously muttering prayers, he placed lumps of mud on the highly-polished brass plate described alternatively as a *Kans Ko Thal* and a *Jbarke Thal*. Meanwhile, the patient sat, stripped to the waist, in front of a pile of three or four pounds of raw onions. The Indian then stood up and, with a shout, hurled the brass plate at the unfortunate man's back. It stuck firmly, just as it landed, on his flesh. The man then had to eat the pile of onions and, as he finished the last one, so the plate fell off with a loud clatter. With the plate had, apparently, gone some of the snake's venom! For the next four or five days the

## *Snakes*

poor man had to return to the shop to go through this same ceremony. He was delighted with the miraculous cure, while the Indian had enhanced his own reputation by saving yet another life. Seemingly, only the Indian knew that, if the man could survive till dawn, then his life would no longer be in danger.

The Nepalese have many phobias about snakes. They believe that a lactating woman is especially at risk, thinking that a snake is attracted by milk and will bite the breast of such a woman for the milk. The truth is simple, snakes are not attracted by milk. The Nepalese are so fearful of snakes that should a snake even cross the path in front of them, they will not proceed further along that way, for very bad luck will befall them. They will have to take a detour, even if this involves many extra miles and other hardships.

## The Green Parakeet

The green parakeet was my favourite Nepalese bird. We kept one as a pet for over a year, though I must confess I didn't spend much time talking to him because all I managed to teach him was how to wolf whistle!

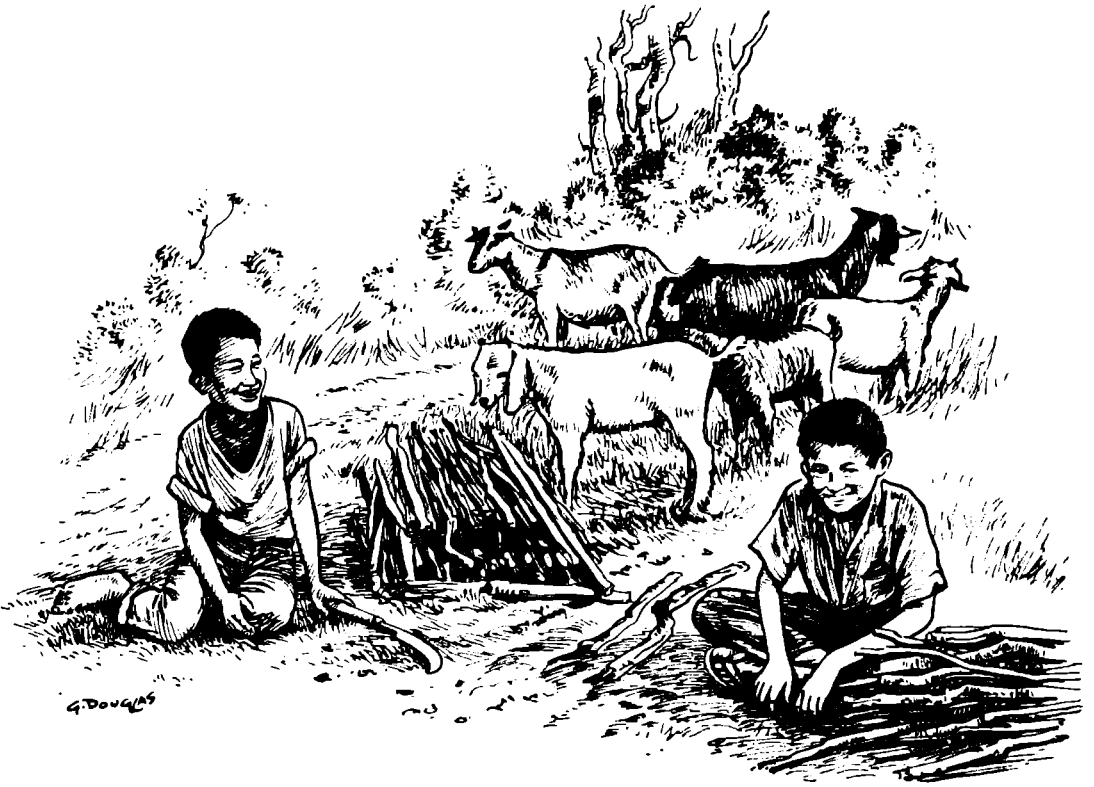
We called him Percy, and he made a very pretty sight with his red beak and beautiful, brilliant green plumage with a long tail of a bluer green. I cannot think how my baby's fingers escaped being pecked off, for James would cling on to the sides of the cage and peer in. Extraordinarily enough, the bird, though he must have been irritated by the little boy banging on his cage, never once bit him.

During the winter months, huge flocks of these birds screamed across the sky. It was always a beautiful sight. We often had a few in our garden, which was however, virtually a sanctuary for numerous mynah birds. It was the resettlement farm, which was attached to the cantonment, where the retiring soldiers were taught modern ideas on farming, which was plagued by parakeets. These birds, and incidentally the rhesus monkeys, caused extensive damage. On the other side of the jungle, ten miles from the camp, is a Nepalese agricultural farm. Here, not only are they also plagued by monkeys and parakeets, but also by wild boar, which cause quite considerable damage. These illustrate just a few of the hazards of farming in Nepal.

The mating time for the parakeets is January; the baby birds hatch out in February. The parakeets make their nests in little holes high up tall trees. The babies stay in these well-disguised holes, not venturing out until they are four months old.

The ideal time to catch these birds was during these months. Many Nepalese homes in the hills have either parakeets, green parrots or hill mynahs as pets. They all speak well, though none can compare with the mimicry of the hill mynah.

## *The Green Parakeet*



Now Bhimprasad was a twelve-year-old goatherd. He had plenty of time to watch the habits of the parakeets and noticed how a cock bird would visit a particular nest up a very high tree. With the help of a piece of rope, he climbed some sixty feet up the tree and found two little parrots in the nest. Meanwhile, his friend had prepared a thick layer of twigs and grass on the ground beneath the tree, to act as a mattress for the birds. Bhimprasad dropped his two prizes on to the soft ground. At the same time he accidentally dropped the piece of rope; he was left stranded up the tree as there were no branches on which he could climb down.

It was already dusk and his friend, worried perhaps about keeping the goats too long in the forest at night and even more worried about his own skin, with hyenas, jackals, leopards and snakes about, disappeared with the two parakeets. Anyway, whatever the reason, he simply vanished, leaving poor Bhimprasad stranded. Night fell quickly, as it does in the tropics, and Bhimprasad became very frightened. He tried to get down in the dark.

## *Animal Section*

The inevitable happened. He slipped and fell, breaking his thigh-bone and grazing his right cheek. It was really a fairly fortunate escape, as he could easily have been killed.

There he lay, whimpering on the ground, for four agonising hours before his distraught father found him and carried him to the B.M.H., a journey taking him another four hours in the dark of night.

We fixed his leg on a Braun frame, pushing a Steimann pin through his tibia, just below the knee, and adding seven pounds of weight to this pin via a cord over a pulley.

He soon settled down happily to hospital life. His little face healed up perfectly and his one resolve was to take revenge on his friend.

I asked him what he intended to do.

‘Hit him,’ he replied.

‘Where?’ I asked him.

‘I’m going to break his leg!’ he muttered.

‘But I have no beds left!’ I cried desperately.

He didn’t even reply. . . .

PART THREE

Medical Section





## Cholera

Everyone who travels to the Far East has heard of cholera as we must all, by international law, not only have had inoculations against it, but also hold current certificates as proof of these injections before even being permitted to enter certain countries.

Cholera has not been seen outside Asia since 1923, except for two outbreaks in Egypt in 1947 and 1948. However, in the last century devastating outbreaks of the disease spread across Europe and Great Britain with ghastly results.

Fifteen thousand people died of cholera in India in 1966, nearly twice as many as were killed on the roads in Britain that year.

Samarbahadur arrived at the hospital, when I was feeling at my lowest ebb. It was twelve midday, never a pleasant time in the Nepalese summer. I had nearly completed my busiest post-natal clinic for many weeks when Gorakh, the clerk in charge of reception, called me out of the air-conditioned consulting-room to see Samarbhadur. Gorakh would only disturb me when a patient was really ill. He was most insistent that the patients should arrive at the right time and, if they were late and not seriously ill, he instructed them to return the following day. Although himself a Gurkha, he was fully aware of the Nepalese national weakness over punctuality. If minor sick had been allowed to arrive unnecessarily any time, day and night, they would soon have completely disrupted the smooth running of this three-doctor hospital.

I found Samarbhadur on the verandah outside reception, lying on a *khat*, a bed with a base made of intertwining strands of canvas. It was oppressively hot outside. He was surrounded by relatives—one holding his hand, another waving a *panka* or fan over his face, another holding a glass of water, another a teaspoon, and yet



## Medical Section

another holding a metal jug with which to refill the glass. Samarbahadur's emaciated form lay on a half-an-inch-thick kapok mattress. Flies were everywhere—although I remember wondering unkindly at the time which were the most numerous and troublesome, flies or the relatives.

Bandages had been wrapped tightly round Samarbahadur's calves to alleviate the agonies of the muscular cramps caused by salt deficiency. I picked up his wrist but I could not feel his pulse. However, I knew he must be alive as the veins in his feet stood out, due to the tourniquet effect of the cloth. I listened to his heart; I could just hear it beating like a very distant clock. I pulled up his shirt and saw just the flicker of a movement in his abdominal muscles, as his diaphragm contracted with his shallow breathing; his chest did not move at all. There would have been no point in taking his blood pressure; it was obviously so low that it would have been unrecordable. His skin was brown with dirt and his eyes were so sunken in his head that I could hardly believe it possible. I lifted up the skin of his arm between my thumb and index finger. The skin simply remained pinched up. These were the signs of the most severe dehydration I had ever witnessed.

At that moment his eyes flickered and I heard the word *pani* croaked through the parched, cracked lips. This word caused a sudden flurry of activity amongst the crowd. Water was poured from the jug to the glass and thence to the teaspoon—that was where it stayed. 'Stop!' I shouted. 'Get back!', restraining with my arm, the crowd, which included the relative holding Samarbahadur's hand. I heard a few whispered words of astonishment at my command, but they obeyed me. What sort of doctor was I to refuse a dying man some water?

I knew that, with severe diarrhoea, anything taken by mouth would only result in the worsening of the condition. The sooner the vicious circle was broken, the quicker would be the cure.

Many of us are creatures of habit and retire to the lavatory after breakfast every day. The desire to defaecate usually occurs because of what is termed the gastro-colic reflex. What happens is this, as food enters the stomach certain nerves stimulate the

## *Cholera*

large gut (colon) into activity and this may result in the desire to defaecate. This reflex seems to be so exaggerated in cases of diarrhoea that even when water enters the stomach, it is sufficient to cause an exacerbation of the symptoms.

I ran thirty yards to the ward and collected some litre polythene bags of normal saline, local anaesthetic, syringes, needles and a cannula to set up an immediate transfusion. There was no question of my having the man moved; he was dying. He had literally minutes to live and even a change of his position might have been enough to kill him. I wound a sphygmomanometer cuff around his arm as if to record his blood pressure and squeezed the rubber pump gently to a pressure of a few millimetres of mercury. One little vein appeared and, watched by fifty pairs of eyes, I injected some local anaesthetic over it. I slipped the cannula smoothly into the vein, praying that it would go in immediately, for otherwise Samarbahadur would surely be dead. All was well. Ten minutes after his arrival at the B.M.H. normal saline was pouring into his dehydrated body like a tap; five minutes later a whole litre of the salty solution was inside him and the contents of another polythene bag were running in, though not quite so fast.

I held his wrist—yes, I could feel his pulse at last. I listened to his heart, the sound of the beating had come back from the far distance; it was more like a normal heart. The crisis was over. Samarbahadur had passed out from the shadow of the valley of death.

Then, for the first time, I had time to ask some questions. How old was Samarbahadur? Offers varying from fifty-four to sixty were suggested to me by the fascinated spectators who had now completely accepted me as Doctor Sahib, not the callous British officer they had first suspected.

‘How long has he been ill?’ I asked them.

‘Three days,’ chorused the reply.

‘Was he ill before that?’ I queried.

‘No.’

‘Has anyone else in the village got diarrhoea like this?’ I continued.

## *Medical Section*

'No.'

'How far have you come?'

'Eighteen miles.'

'Where have you come from?'

'Chattraghatti' ('ghatti' means 'mountain pass').

They had placed the khat in a Kosi-project railway truck, which was returning to Ghope village for loads of stones. These were needed to help build a dam for an hydro-electric scheme on the Kosi river. They had arrived within a mile of the B.M.H. on this illegal mode of transport. (Many of my patients made full use of this line. Some even climbed on top of the rocks, with their legs in plaster, while others clutched their new-born babies. It was a most convenient method of transportation, being free. It ran once or twice a day but at any time and these people knew they were fortunate to have it.)

Samarbahadur had suffered from terrible diarrhoea during these three days until his stools appeared like rice water. Each time he was sick, the vomit projected out. Aptly the word 'cholera' is derived from the Greek word meaning literally the 'flow of bile'. At the beginning of the illness, the sufferer will simply vomit his food, but soon, with his stomach empty, he vomits bile.

Samarbahadur had suffered awful abdominal colic and the most frightful cramp in his calves due to severe salt loss as a result of the diarrhoea and vomiting.

I asked my orderlies to undo the rags that had been bound round his calves. Every minute his condition improved. His lungs now began to expand and he slowly moved his stiffened limbs. I now recalled the man who had been holding Samarbahadur's hand. This time he was to hold the hand constructively—so that Samarbahadur would not disturb the transfusion. The drip was his lifeline, replacing the pints of salt and water that Samarbahadur had lost in the past three days.

I instructed the orderlies to leave Samarbahadur undisturbed on the khat but to send the next stool he passed urgently to the laboratory. This they did. Under a microscope we saw millions of tiny comma-shaped cholera vibrio wriggling about. Cholera

## *Cholera*

was confirmed. I prescribed tetracycline which, with the isotonic fluids he was already having, is the correct treatment for this otherwise killing disease.

While I was having my lunch, I noticed how the skies had blackened and soon the rain came flooding down; it was the beginning of the monsoon. How ironical, I thought, with all this rain about, that there was a man who had been dying from dehydration.

It is the onset of the monsoon rains that is responsible for the outbreak of cholera. Filth and excreta are swept by the rains into the sources of drinking water. Well water becomes contaminated with the lethal cholera vibrio. Cholera is then spread from contact with the highly infectious vomit and stools of the patients by hand, but especially by the flies.

After my lunch, I went back to see Samarbahadur. He greeted me with his hands together in the Indian greeting of *namaste*. We erected a tent outside Ranjit's office, and all night Samarbahadur lay contentedly on his khat, the drip running safely into his arm, while being nursed by his many relatives. Next day he was a new man and later he returned home, taking his pills with him. He returned the same way he had come, on the little railway, still lying on his khat, but now he was nearly cured; less than twenty-four hours earlier he had been at death's door.

We vaccinated all his relatives, though that had little value compared with my golden words of advice: 'Boil all your drinking water.'

One isolated case of cholera. . . . I knew it couldn't last.

Three days later little six-year-old Kamalkumari arrived. She must have been very ill, for it had been raining continuously all day and these were nightmare conditions in which to travel. They had heard only vaguely about Samarbahadur, for he lived in another village two miles from them. Three other people in their own village were sick, another had already died, while another had been admitted to the little Mission Hospital at Chattra. Kamalkumari was the seventh victim in this epidemic. How many more would come? Were we to be swamped by the epidemic? What on earth could we do?

## *Medical Section*

Kamalkumari had also been ill for three days, though desperately so in the last twenty-four hours. Again, her stools were like rice water which had poured away from her continuously throughout the night. Poor little girl! Her eyes were sunk deep into her head from dehydration; she too suffered the same awful cramps of salt deficiency. Her pulse was rapid and weak; she too needed an urgent infusion. However, the veins of a little six-year-old girl, in a collapsed condition, are a great deal more difficult to intubate than those of an adult. I couldn't admit her, nor could I bring her into the decently-lit admitting-room. I couldn't risk the danger of infecting the other patients in the hospital. I struggled to set up the transfusion, with water from the verandah roof dripping irritatingly on my back, as the monsoon flooded down just two feet away.

First, I had to dose Kamalkumari and her mother with an insecticide, to keep away the flies, which always seem to be attracted to the face of a dying person. Each time I touched Kamalkumari with the needle, she jerked her arm away; the frustration was appalling. I turned to her mother and told her that if Kamalkumari persisted in pulling her arm away, I would be unable to set up the transfusion and she would surely die. Poor mother! She desperately tried to soothe the child into some semblance of co-operation. The mother herself was eight-months pregnant, so must have been completely exhausted by worry and the long journey.

Finally, I had to perform a tiny operation to dissect out the vein in front of the ankle bone. Minutes later the life-saving saline was pouring into her body. Again, like Samarbahadur, after only a few more minutes, Kamalkumari showed some improvement. After the whole litre was inside her she was a different girl.

It was then that I had eyes for other things in the world apart from veins. I noticed that her father was obviously in pain. It turned out that six days earlier a heavy timber had fallen on his arm. He had been in severe pain ever since. Yet, in spite of this, he had carried Kamalkumari, never once complaining. I X-rayed his arm. It was broken, though fortunately the bones were not displaced. I simply placed his arm in plaster.

## *Cholera*

Having fixed up both father and daughter, I asked the mother about the source of their drinking water. It was a well.

My colleague finally decided to take the little girl into the ward where she was barrier nursed. This meant that, whenever a doctor or nurse attended her, they first had to put on a special gown and mask. In addition they had to scrupulously wash their hands after touching her. Kamalkumari had her own bed-pan but didn't need her own feeding utensils, as the Nepalese eat with their fingers. A portion of the ward was cornered off with screens and the little girl was nursed back to health.

Meanwhile, we sent Kamalkumari's mother and father off with strict, urgent instructions to warn everyone in the village that they must boil the water before drinking it, and keep the flies off their food.

I prayed that this would be the last case of *haiṛa* (cholera) I would have to deal with. The advice, fantastic though it may seem, worked. During the next few weeks, the Nepalese in these two villages not only boiled their water but sent warning messages to the adjoining villages to do the same. The epidemic had been crushed as soon as it had begun. We were not to see another case of cholera in my two years in Nepal.

## Gas Gangrene

Sixty-year-old Pechi fought a hard long battle against gas gangrene—but lost. The villain in her life turned out to be her pig. Twenty-five days before her arrival at the B.M.H., Pechi had gone out to feed this, her only pig. She had left it rather late and the pig, in its over-eagerness to get its long-awaited meal, bit the end of her thumb. Three days later her whole arm had become swollen.

Soon Pechi's swollen arm started to blister and as these blisters burst, so the flies were attracted in their droves. The pus in the arm finally burst out and with it maggots appeared. At this revolting stage, her four sons, who had been praying in vain to the gods for her improvement, decided that things were getting beyond them and their gods. They set forth on a two-day journey by bullock cart to a small government hospital at Rangeli. This had been four days before her arrival at the B.M.H. Her condition had been pitiable. Local herbs had been applied to her arm while transfusions, using the fluid from coconuts, had been injected into her, for no alternative transfusions were available.

These four days in the Rangeli hospital had cost the family 200 rupees—about £10. They had had to borrow this amount and hoped to pay it back from the jute they were growing, which was due to be harvested in a few weeks time.

The infection worsened; there remained only one cure, the arm had to be amputated, urgently and at once. But such an operation would cost a further 500 rupees. This meant, even if they could borrow what was to them such a vast sum, that they would all probably have to live in debt for the rest of their lives. They simply couldn't raise the money, so they took Pechi away. They left Rangeli at 7 a.m. by bullock cart, arriving at Biratnager at 4 p.m. the same day. There they did some fast, hard, desperate bargaining, managing to hire a jeep for 40 rupees to take them

## *Gas Gangrene*

all to Dharan. They finally arrived at the B.M.H. around 7 o'clock that evening.

Pechi was in a desperate state; how she was alive at all amazed me. Her pulse was impalpable, she was as pale as a ghost and she could neither move her arm nor had she any feeling in it. It was covered with the most filthy bandages imaginable.

Three of her sons and her two daughters had come with her. As the sister gently removed the dressings, the ghastly condition of the arm became apparent.

'It must come off,' I told Somai, her eldest son.

'If it must be, it must be,' he sighed.

'At least the operation will cost you nothing.' The three brothers looked immeasurably relieved. 'At least, not rupees,' I added quickly, 'but you must each give your mother some blood.' This they agreed without a murmur although, at the actual bleeding time, they were much more worried. However, after the donation, I gave each of them a huge plate of rice and chicken curry and let them sleep in chairs in the ward.

Meanwhile, I set up an infusion on Pechi. I let the glucose water drip in slowly as her haemoglobin was a mere 35 per cent. Overloading of her circulation would increase the work of her heart and might kill her. Her blood was Group A and two of her sons had the same group. Somai had Group O blood—that group which is safe to give nearly everyone. We now tested her blood against all three pints. We were able to give them all to Pechi.

Meanwhile, I had prescribed large doses of antibiotics and a further injection to prevent tetanus. My plan was simply to try to get her fit enough to withstand an anaesthetic so that I could perform the amputation. By next morning her condition was much better so, with a tourniquet round her upper arm, I quickly amputated the diseased limb.

Here I made a serious miscalculation. As I had not wanted to waste a drop of her precious blood, I had performed the operation with the tourniquet on—but even as I amputated the arm I noticed that some pus and gangrene had extended still higher. I had prayed that the antibiotics would control this.

By next day she had improved so much that she even managed



## *Medical Section*

to drink some milk. The following day we got her out of bed for, due to her immobility in the past fortnight, she had developed a horrid bedsore. Only by keeping her weight off her bottom could we hope to cure it.

Three days later I took her to the theatre, planning just to dress the wound, but, to my horror, I found bubbles of gas in the dead muscle. She had gas gangrene. Quickly, without a tourniquet, I slashed off the remainder of her arm through the shoulder—too late. The gas gangrene had spread further, into the muscles around her shoulder; I had to go on till I was as certain as I could be that there was no gangrene left. Brutally I removed much of the muscle around her shoulder until finally the area was all clean and bleeding freely. I then smothered the area with hydrogen peroxide in an attempt to get as much oxygen into the tissues as was possible—for this horrible bacteria only grows well where there is no oxygen.

She survived the savage operation but was now too desperately weak. She needed further blood urgently. There was none. Her relatives, content that she was recovering, had gone home.

When I came back to the ward that afternoon I found that she had passed away. How sad. How sad for her children when they had tried so hard—when they had seen her improve in front of their eyes, only for her to die suddenly. How sad and wretched I felt. If only I had been more radical with my first operation.

We had to close the operating theatre for two days after this amputation, till we were certain all the gas gangrene bacteria had been killed by fumigation. I couldn't risk a second case of gas gangrene, yet only ten days later we were to see another such case.

Lalbahadur was only thirty-five, yet when I first saw him he looked a very, very old man. I didn't really first see him—I actually first smelt him! I knew he must have been ill, for Gorakh actually rang me to say that a very ill man had arrived, and Gorakh was normally very reticent about disturbing me during my operating list.

'Have an X-ray done,' I had suggested over the phone.

'No, sir,' he replied to my astonishment, 'that will not be necessary.'

## *Gas Gangrene*

'Then send him straight to the theatre as he is,' I said.

This he readily agreed to do.

I left the operating theatre a few minutes later to be greeted by this frightful stench. I pulled back the white paper towel that was covering Lalbahadur's leg. The leg lay grotesquely twisted, the bones at the level of the knee-joint were all exposed, the foot was cold, icy cold, even in this heat.

'What is this?' cried the sister. The tissues seemed to be moving. I scanned the leg carefully; there were little tiny bubbles of gas present under the skin.

This time Lalbahadur was going to benefit from Pechi's death. Would it have been any compensation to her if she knew that, by her death, she would have saved Lalbahadur's life? It is sad to think she will never know—but perhaps she was watching.

There was no time for pleasantries, no time for bedside manners; death and disaster must be faced.

'Either I take off your leg or you will die,' I told Lalbahadur. His face, already twisted up by toxæmia and pain, seemed to age further, if that was possible.

'I must ask my relatives,' he croaked. So a whole troop of men came into the theatre corridor. It didn't matter; the gas gangrene germs were already there in the theatre, a few more lesser germs would hardly matter.

'If you want this man to live he must have his leg off, now,' I told them.

Meanwhile, my anaesthetist was preparing plasma, and, as they signed the consent form, he slid the needle into one of Lalbahadur's veins. Within minutes of his arrival at the B.M.H. he had lost his leg. I took it off high through the top of his thigh—a difficult operation as the muscles are so thick in that part of the leg. There was no question of any tourniquet this time and his blood loss was replaced with a pint of blood from my emergency reserve. To this I added two pints of plasma and two pints of a blood substitute called Dextran.

He was a very, very ill man but even so, far fitter than Pechi had ever been. He survived the operation and three further operations that were necessary to close the wound. He even

## Medical Section

survived a nasty fall off his crutches on to his stump, when he was re-learning to walk, though this shattered his morale and caused him excruciating pain.

Now how had it all happened? Lalbahadur had set forth one October morning with his eight-year-old nephew Sanu to collect firewood, and about four hundred yards from his house they came across a tall pine tree. This he proceeded to cut down but, to his horror, the tree suddenly started falling towards instead of away from him.

Lalbahadur stood paralysed with fear as the great tree slowly started to crumble down over him. He fainted in the path of the falling timber. How long the tree lay on top of him he never knew. He believes he was trapped for at least an hour while Sanu raced back to find Lalbahadur's elder and younger brothers, Chatrabahadur and Narbahadur. How they even lifted the tree off his crushed and broken limb he could not guess.

Six men set off at 10 a.m. the same day, carrying Lalbahadur by turn in a doli. Lalbahadur was unconscious for five days as they wound their way along the tracks up and around the undulating mountains, their bare feet as sure-footed as those of mountain goats. It was only on the last day of their journey that Lalbahadur recovered consciousness, and then he really suffered, every jolt being like a sword plunged through his leg. He knew he was dying.

But Pechi, and her pig, had saved his life.

How would he manage without a leg? I asked him. He owned some land on which he grew *kodo* (maize) and potatoes. He also had a couple of cows and a buffalo. He was married but had no family; he didn't even have a wife now. Previously she had gone home to her parents and had never returned. Subsequently he had heard that she was living with another man. He couldn't understand this as she had seemed happy enough before.

I kept him in hospital as long as possible until he had acquired confidence on his crutches. Finally, after two months, I sent him home.

He had mastered his crutches—would he be able to master his life?

## Rabies

Rabies, which is derived from the Latin 'rabere' meaning 'to rage', is, in my opinion, the most terrible disease that man can suffer. Its other name, hydrophobia, means 'fear of water'. Even the sight of a glass of water is sufficient to cause the sufferer to go into terrible spasms. Death is inevitable.

Rabies, a virus disease, is endemic in Nepal, being carried by jackals. These cowardly creatures usually only attack man when they are dying from the disease. Most nights these animals entered the cantonment, or hunted in packs across the adjoining golf course. There is something rather frightening and unnerving about their long drawn-out, high-pitched howls, especially when there is a whole pack of these wolf-like animals. Dust-bins were one of their main objectives. These they knocked over in the middle of the night, when scavenging for food. Our sleep became so disturbed that we had to knock iron poles into the ground, through the handles of the dust-bins, to prevent them being upset. Even so, the jackals still succeeded in knocking off the lids with almost as loud a clatter. They were further attracted by the lights, and by the hope of killing chickens which were kept in many of the gardens. The jackals were most bold in the dry season, when desperate for water. The Brigadier's wife, preparing for her weekly dinner party, actually found one in her sitting-room. Not only was it the jackals that came into the camp at night but also stray dogs from Dharan bazaar. The jackals often bit the dogs and thus spread the rabies virus. There remained the constant danger that the village dogs would then bite the domestic, cantonment dogs or cats, for thus the infection could have occurred even inside the camp. So serious was this risk that Anna and I never kept a dog or cat, even though they would have been useful in chasing away the rats and snakes.

## *Medical Section*

One of the cantonment doctors had been given a pair of leopard cubs, which had been found abandoned in the jungle. Soon after, one of the cubs died but the other appeared to thrive. Finally, the cub, which had been given a free run not only of the house and garden but also an adjoining house, became too big to handle. It had never really been tamed. The doctor made arrangements to present it to Edinburgh Zoo. The cub duly arrived at the zoo but was suffering from rabies, though apparently it had been quite fit when it left Dharan. It must have been bitten by a jackal and no one had known. As a result, everyone who had handled the cub and had been in any possible contact with the cub's saliva—for it is in this that the rabies virus is present—had to receive a course of anti-rabies vaccine. These unfortunate people included the doctor and his wife, their two small children, all their servants and all the occupants of the other house. The cub had been tiny, it had had to be fed with a bottle; during the feeding it had often scratched the arms of the handler.

The anti-rabies treatment consists of a most unpleasant course of injections. These are given into the abdominal wall. As many as fourteen injections may be necessary for a bad bite. As well as the pain and discomfort, the injections are not without risk to the patient. Some people have actually died as a result of them; other complications include nerve palsies and strokes.

The problem of any dog bite in the tropics is to know, for certain, whether the dog really has rabies or not. All jackal bites, however, must be assumed to be rabid, for otherwise they would never have been inflicted. In theory the answer is simple, in practice it is a very difficult problem. A rabid dog will inevitably die within ten days of being infected, though this time is usually considerably shorter. The ideal management of the dog is either to chain it up or lock it up alone in a room with sufficient food and water so that it cannot bite anyone else. Should the dog survive the ten days it has not got rabies, the person bitten is no longer in danger and the dog need not necessarily be destroyed. It is usually quite safe to wait this period of time before starting treatment because rabies has one saving grace, the incubation period may be very long. It is only when the virus actually reaches

## *Rabies*

the brain, that the disease becomes apparent. It reaches the brain along nerves, travelling very slowly, at the rate of about one centimetre a day; thus, with a bite on the foot, the rabies virus may take three to six months before it reaches the brain. A bite on the arm may be lethal in about six weeks and only with a bite on the face may the disease begin within a few days. It is therefore only with facial injuries that one cannot afford to wait to see what happens to the dog, before commencing therapy. Even villagers, who live miles away from any source of medical aid, have time to reach help before the otherwise fatal symptoms commence. There is of course the obvious drawback, that a person bitten by a rabid dog might well assume that he is all right, when so many weeks have elapsed with no ill effect. Occasionally the dog is beaten or stoned to death by the frightened villagers. Following this, the carcase is simply left to rot in the street; the people are far too frightened even to handle the remains, fearful that they will contract the disease. So it is left to the vultures to pick the bones clean. More often, however, the rabid dog is simply allowed to roam the streets, when it may bite other people and animals before finally succumbing.

‘Why is this? I asked Udai Sing. ‘Why are not all rabid dogs shot? Is it due to lack of ammunition?’

The reason is much deeper than this. The Gurkha, allegedly anyway, loves all animals, especially the cow, dog and crow. This is epitomised at the Dewali festival. On the first day of this November holiday, the crow is honoured, food being put out for these birds. Next day, when it is the turn of the dog, garlands of flowers may be placed about their necks. On the third day, the cow is revered, while on the fourth day, man himself. This deep inherent respect for animals may on occasion extend even to the rabid dog, in certain areas. Udai Sing warned me, that if I were to shoot such a dog in Dharan, I might well get a severe reprimand from the people. If a Nepalese shot the dog, he might well be in danger of being beaten up for his action.

Subsequently there was such a large number of stray dogs in Dharan that it was dangerous to walk into town without adequate protection. I not only steered well clear of any dog but also carried

## *Medical Section*

a stick to ward off any sudden attack, although this in itself would not have been sufficient protection against a really vicious assault. In addition, I felt happier wearing long trousers, as these afforded some protection from the infected saliva.

Whenever the victim of a dog assault came to the B.M.H., it seemed that he had no idea either what had happened to the particular dog or what was likely to happen to it. The locking-up rule was only really practical for domestic dogs, when the villagers were co-operative over their own pets, which they wanted to protect at all costs. As often as not, we had to start the treatment merely on the villagers' description of the dog. The tail of a rabid dog hangs down like a plumb-line, for there is no tone left in the muscles of the tail. The dog's eyes are red, the tongue protrudes and saliva is frothing from the mouth. The poor dog, though a menace to all, is itself in agony, not even being able to swallow its saliva. The dog snaps at anything and everything in its path, often chasing other animals to bite them. Several people may have been bitten by one dog.

As well as the fourteen injections, we had to give anti-tetanus serum to prevent lockjaw and penicillin to prevent an infected wound.

Nearly all the villagers came up with the same fear. They believed that when the rabid dog or jackal had bitten them, a jackal cub started growing inside their bellies. After six months, the baby jackal would start moving and crying inside them and it is then that the villager himself will start behaving like a mad dog, before rapidly dying of rabies. Others told me how they believed that puppies would either appear in their stools or be vomited at such a time. In any case, these villagers knew that they would be dead within six months of being bitten.

One day a very frightened woman came to the Villagers' clinic, begging me to kill the jackal that was growing inside her. Two months earlier she and her husband had been attacked by a mad jackal. She told me how a jackal had grown up in her husband's abdomen until one day he had started to scream and cry like a jackal; saliva had been frothing from his mouth and he had died a few days later. The poor woman was fully expecting the same

## Rabies

fate. She was terrified, not for herself but for her small children, as there would be no one left to look after them. We gave her the full course of fourteen injections and she left gratefully, firmly convinced that we had killed the baby jackal with the injections, especially as they had been given into the abdominal wall. The husband had been attacked first, being bitten on his arm as he had tried to ward off the diseased animal. Before the jackal had gone, it had bitten the woman in her leg, though its teeth had passed through her sari. What had saved her life, was that the virus had had to travel further from her leg wounds than it had from her husband's arm. It was also possible that the sari had prevented the infected saliva from entering her body, even though the jackal's teeth had actually broken the skin.

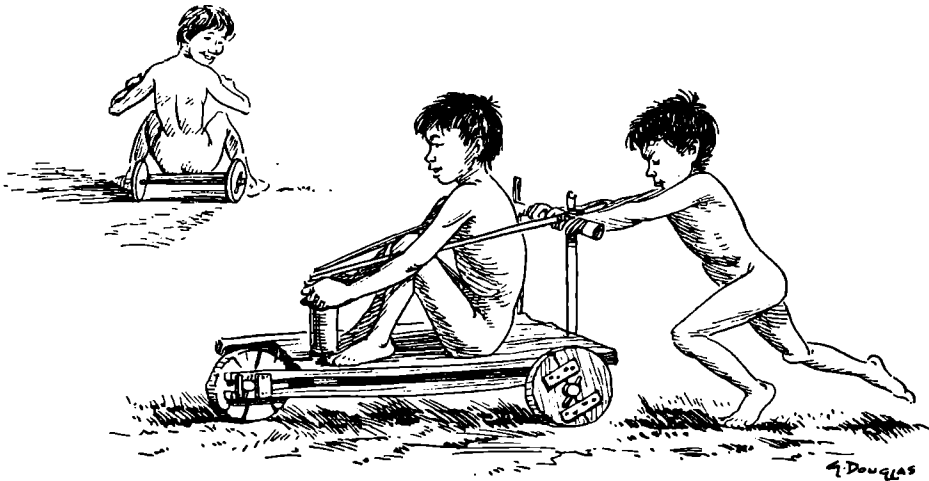
It is just possible that the witch doctors are better at curing this particular disease than we are. This, of course, is not very difficult, as our results, once the disease was established, were a hundred per cent fatal. Tekbahadur, in reception, told me of a jackal that had gone berserk in his home village in the hills. The jackal had bitten several dogs which in turn had contracted rabies; soon the village was full of mad dogs, a terrifying set-up. The dogs bit the villagers and four or five people died of rabies in one family alone. Tekbahadur's cousin was one of those who had been bitten. In due course he too developed rabies. He hid in the dark corners of his house, before starting to scratch and bite like a mad dog. His father called in the witch doctor. The latter built a fire to which he added certain herbs. He placed a large cloth over the boy's head, making him inhale the smoke deeply. Meanwhile, the father had been instructed to prepare a large bowl of rice, to which he had added as many luxurious and exotic food substances as he could afford. The witch doctor placed a piece of medicinal wood, which he had collected from the jungle, on the mound of rice. When the boy had finished the inhalations, the witch doctor wrapped the piece of wood in some cloth. This he tied round the boy's neck with a piece of string. This charm is called a *buti*. The witch doctor then went home with all the food. Two weeks later the child had recovered! This was the first cure for rabies I had ever heard of in my life, yet I believed it. Amazing things occur



## Medical Section

in the mountains of Nepal. That boy finally enlisted successfully as a Gurkha soldier.

I do not know what odds a bookmaker would have given on Tarmaya surviving, but, after careful consideration, I rated her chances as barely one in ten. Yet Tarmaya had just one ace up her sleeve. This, nature played brilliantly for her; the ace was her youth. She was seven years old.



Tarmaya had been playing in the streets of Dharan when a large black dog had gone straight for her, caught her belly in its jaws, which it crunched together. The dog lifted her bodily in the air and hurled her across the street. It then savaged her a second time. The dog was easily recognisable. It had only part of its tail, which hung straight down. The dog's eyes were red, saliva had been frothing from its mouth. It had rabies.

Tarmaya was not the only victim. A woman, having been attacked by a dog of exactly the same description, came up for the anti-rabies vaccine that very day. The following day, four men also arrived having been similarly assaulted. Still the dog was permitted to roam the streets.

Tarmaya had been carried to the B.M.H., with deep wounds on her scalp and leg, as well as four cruel fang marks in her right lower abdomen. The wounds were thoroughly washed with an antiseptic, dressings were applied and the first of the fourteen

## *Rabies*

anti-rabies injections of vaccine given. She was then sent home. The doctor had been so conscious of the awful dangers of rabies that he had completely forgotten to order the anti-tetanus injection. Next day, Tarmaya had been brought back for the second anti-rabies injection, but her condition had so deteriorated that the reception orderly immediately rang up the doctor. Tarmaya had spent a terrible night. She had a high raging fever, was vomiting copiously, and, most sinister of all, her bowels had stopped functioning. As the doctor examined Tarmaya's abdomen, he felt air crackling under the skin around the wound. He suspected, quite rightly, that the guts had been perforated. He rang me up, telling me what he feared.

'Try to stand the child up for a moment and X-ray her abdomen,' I suggested. Any gas present in the abdomen would collect under the diaphragm, where it would be immediately recognisable on the film. Meanwhile, I went over to see Tarmaya. Her pulse, very rapid and around 140, was already weak. Like so many children, she was too frightened to lie down on the couch. (I find that children rarely mind sitting for an examination, yet nearly all are terrified of lying down, however much care, kindness and patience I might show them.) I had to examine Tarmaya as she stood. Tears poured down her little face as she hugged her mother's neck. She had no father, he had died five years earlier from 'fever'. This almost certainly meant tuberculosis.

A man had however come along with her. I recognised him at once. He was an old patient of mine, having previously been involved in a road traffic accident. At that time he had suffered such a severe wrenching injury to his shoulder, that the nerve plexus in his armpit had been damaged. His arm had been completely paralysed. He too had been brought up to reception in a very pathetic state, for his future in Nepal would have been grim, to say the least, if this paralysis had persisted. I had reassured him, when first I had seen him, that he would slowly recover. Now, six months after his injury, his arm was nearly normal. He had been a most faithful attender at my out-patients' clinic between times. However, his reassuring words to Tarmaya did little to comfort her. As my fingers gently prodded her abdomen, she

## *Medical Section*

whimpered, even when I was feeling well away from the wounds. (As a paediatric house-surgeon at Guy's Hospital, I had been taught a most useful physical sign by my chief. He called it 'the positive ouch sign'. 'When you press a child's tummy and the child cries "ouch!", there must be something seriously wrong inside,' he had said. He had been referring mostly to little children with acute appendicitis, but the same held true for many other mischievous conditions inside the abdomen. There was no doubt about Tarmaya's 'ouch!', pain produces a universal language.)

Next I listened, with my stethoscope, to the distended little abdomen in front of me, for a full minute. I didn't hear a single bowel movement during that time. This implied that the guts were paralysed. At that moment an orderly arrived with the X-ray film. There was the tell-tale gas under the diaphragm. The dog's teeth had penetrated much deeper than my colleague had at first suspected. The long sharp fangs had actually bitten through her intestines.

It was now twenty-four hours since she had been savaged. Every minute we delayed, Tarmaya's condition would become more serious. She had fulminating peritonitis. Her only chance lay in immediate operation. On my instructions, the nurses passed a thin polythene tube through Tarmaya's nose into her stomach. With this they were able to aspirate the fluid that had accumulated in her stomach, as a result of her paralysed bowels. It was an essential precaution, for with a stomach full of fluid, should Tarmaya have vomited during the anaesthetic, the gastric contents could well have gone down her trachea into the lungs. Even if she could have survived such a disaster, she might well have suffered from a collapsed lobe of her lung or even double pneumonia. Within half-an-hour of my first seeing her, Tarmaya was in the theatre. I soon found out exactly what had happened. Only one fang had actually perforated the full thickness of the abdominal wall, but this had so savaged a piece of gut that the piece of intestine had become black and gangrenous. Other segments of the bowel had been bruised, but there was only the one actual perforation. The abdominal muscle, through which the teeth had passed, was severely contused and already a pool of thin pus had

## *Rabies*

collected inside Tarmaya. I mopped out the pus and removed the gangrenous piece of gut, joining the two cut ends of the intestine delicately together, until it all looked as good as new.

Two further problems had occurred: the first, as I had actually opened her abdomen, when dilated loops of bowel had burst out of the wound. Their replacement was very difficult. I had had to release a little gas through the damaged gut, to decompress the distended loops of intestines sufficiently to allow me to replace them. The other complication was worms. Tarmaya had several round worms in her small intestine; one I palpated, was at least fourteen inches long. All these worms were well above the perforation.

What was I to do? If I had milked the worms out through the hole, there was the risk that intestinal fluid, which collects when the guts are paralysed, would be spilt into the already infected peritoneal cavity, making the infection more serious. If I left them where they were, and the worms died, then their bodies could easily block up the site where the bowel had been joined, for the lumen is always very small for the first few days. It is essential to join the gut so carefully that the union is waterproof. In addition, the tissues of the body react to trauma by swelling, as is seen when someone is punched on the eye. On the other hand, if the worms lived, they could have wriggled their way through the repair, thus perforating the guts yet again, and Tarmaya would be back where she started! Now if I were to kill the worms with a drug called antepar, which I could do as soon as the intestines started functioning again, the guts might react so vigorously to the anti-helminth, that again the suture line might be in danger of breaking out.

It was a horrid predicament to be in, so I left it for nature to sort out, realising that the quicker I was in finishing the operation, the better were Tarmaya's chances. I left the worms where they were: they had obviously been there a long time, surely they could stay there a little longer?

Although still very weak, she passed a comfortable night, and next morning, I assumed that she was probably out of the wood. I decided not to give her any further anti-rabies vaccine until she

## *Medical Section*

was stronger, for the vaccine can have very unpleasant side-effects. I also decided not to kill the worms yet; I would just leave her in peace to recover.

That very evening, just as I had walked into the ward, Tarmaya suddenly started to convulse. These convulsions were to continue for the next two-and-a-half hours. During them, Tarmaya had been frothing at the mouth. Finally, as the convulsions eased off, I had tried to open her mouth. Her teeth had remained locked together. Thoughts of the awful complications of dog bites: rabies and tetanus, raced through my mind.

It was surely far, far too soon for either of these dread diseases to have occurred, I thought desperately. Even so, I scrupulously scrubbed my hands, for they had been in contact with her saliva, just in case it was rabies. Tarmaya had suffered these severe scalp wounds, but the rabies virus will only travel along nerves to reach the brain. Even though the scalp is so close to the brain, the virus still has to travel a fair distance along a nerve to actually reach the brain, so the convulsions couldn't have been due to the rabies, unless the fangs had actually penetrated the brain, which however, they had not. I was taking no further chances. I immediately ordered the recommencement of the anti-rabies vaccine. When someone is as ill as Tarmaya, all risks are justifiable.

I consulted the medical books: 'In very severe cases, tetanus can occur within forty-eight hours of injury—when the prognosis is very bad.' Tarmaya's injuries had been inflicted fifty-and-a-half hours ago. She had tetanus. Her prognosis was simply appalling. The average incubation period for the disease is eleven days. When the disease occurs before that time, the chances of survival are grim indeed.

I don't think anyone in the world could have been treated so quickly after tetanus had first presented itself as was Tarmaya. Ten minutes after the first convulsions had racked her little body, 50,000 units of anti-tetanus serum were pouring into Tarmaya's circulation.

Tarmaya's tetanic spasms were controlled but she remained desperately ill. Her pulse rate had increased alarmingly. It was now 160. Yet in spite of this, Tarmaya's condition gradually

## *Rabies*

improved. She was still deeply asleep, for heavy sedation was essential to control the spasms.

Meanwhile, the infection in her abdomen had cleared up. Her bowels had started to function once more. I then gave her the antepar. Over the next day or so, she passed five long round worms. The repaired gut had obviously healed soundly. We had to feed Tarmaya through the Ryle's tube, through which we gave her her drugs. Still Tarmaya slept. Everything appeared to be under control. I reduced the sedation, only for the convulsions to return. Immediately I was forced to recommence them in the original dosage. For a second time the spasms were controlled. I slowly reduced the dosage again. Over the next few days I had weaned her off them completely. There were no more convulsions, the tetanus had been cured—but still she slept. Days passed before she at last opened her eyes. Even then, she simply stared vacantly in front of her. Her little hands were tightly clenched, her legs were paralysed.

Slowly it dawned on me what had happened—she had also suffered from encephalitis, inflammation of the brain, a dreaded complication of the anti-rabies vaccine. How sad it was to have weathered all this illness and now, on the threshold of a miraculous recovery, to have developed this ghastly complication.

The days went by and still Tarmaya continued to simply stare, apparently unseeingly, in front of her. There was only one treatment—massive doses of vitamins. Then one day Tarmaya started to move her right leg; a few days later she could also move her left leg. The delay in the recovery of the left side might have been because she had had to have all fourteen injections on that side because of the wounds on the other side.

One day I noticed that Tarmaya's sleep was distinctly lighter. 'Try her with a bottle,' I told the sister, who thought I was crazy. Next day, however, Tarmaya was drinking from the bottle. True, it was only a little, yet a few days later she was taking milk from a teaspoon. We were observing all the fascinating stages of development, which Tarmaya was relearning after her severe brain damage. The little girl was still incredibly weak. She just didn't have enough muscle power to support her little head, just

## Medical Section

like a young baby. Days later, as I walked into the ward, I heard 'namaste, namaste, namaste' being repeated again and again. It was Tarmaya who, in her semi-comatose state, was repeating the only greeting I paid her each morning during my rounds.

Tarmaya was most troublesome at night. Her high-pitched, piercing screams were both unnerving to the other patients and intensely irritating to the nursing staff. This phase also passed. Next, her eyes followed my progress round the ward.

One afternoon I found Tarmaya's mother looking lovingly at her over the cot rails. I sat her down and gently picked Tarmaya up and placed her in her mother's arms. How happy the mother looked! She held Tarmaya as we might hold a priceless piece of Dresden china. Some minutes later, she was affectionately patting Tarmaya's bony little bare bottom. A few days after, Tarmaya greeted me with her little hands raised in an attempted *namaste*; this she perfected a little later that week.

Quite suddenly, we couldn't give her enough to eat. She kept holding up her plate for more. True, she ate just about as badly as my son James who, at the time, was eighteen months old. If he didn't think much of his food, he simply picked at it with his teaspoon, but if hungry, he picked up whole handfuls which he crammed into his mouth. The area round both James and Tarmaya at feeding time was covered with mishits! At least Tarmaya improved, which is more than I could claim for my son.

We next tried to teach Tarmaya to walk. At first two nurses had to support her, but she was very game and very thrilled with her attempts. Soon she was walking with just one nurse holding her up, and later she learned to push the food trolley on her own. This acted as a 'baby walker'.

At this stage I had to send her home. She had already been in hospital nearly two months. Her cot was needed by a score of other ill children. I felt so sad at having to send her home; she behaved so sweetly as she recovered from her ill health.

So Tarmaya, having been subjected to the ravages of a rabid dog, with resulting gangrenous and perforated bowel, tetanus and inflammation of the brain, had defeated all these calamities. She had 'aced' them all with her youth.

## *Rabies*

Young Tilakbahadur was a mere wisp of a lad, just sixteen years old. He was sitting in the back of a Land-Rover when I first saw him. His friend was putting a restraining, yet comforting, arm round him. The front portion of this part of the Land-Rover was covered by a cheap old sleeping-bag to keep out the cold. It was a January morning and bitterly cold for a people dressed only for the warmth of India. I had just arrived at reception for the Saturday morning sick parade. Due to the intense cold, few had arrived by 7 a.m.

‘Sir, you better see this boy,’ suggested Gorakh, ‘he has been bitten by a mad dog.’

The next few minutes were to be amongst the most horrific I have experienced as a doctor. Suspecting that he might have rabies, I took the precaution of taking the case history as I stood outside the Land-Rover. Tilakbahadur had only arrived in Dharan the day before. He had travelled from the village of Manhumula. He had been nursing his own pet dog which had been very ill. The dog had been salivating profusely, its eyes had been red and its tail hung down. The dog had had to be chained up as it had gone mad. After ten days, it had died. Twenty-five days later Tilakbahadur had arrived at the B.M.H. He had been very close to the dog all this time, though it had never actually bitten him. At first, some four days earlier, Tilakbahadur had felt very cold and had wanted to walk only in quiet secluded places. He told me how his eyes had felt swollen and painful while his throat ached. He had suffered from a cruel headache all this time and was running a fever.

As he told me this story, he appeared quite normal. He simply looked an ill, frightened young man, with very gaunt features. I began to wonder if he really had rabies, or indeed, if he was really very ill at all.

I asked my interpreter, Udai Sing, to see if he could prove to me that the boy was suffering from rabies. He asked the boy to lift up the corner of the sleeping-bag and look into the light of the rising sun. This the boy obediently did, but no sooner had he done so than he dropped the cover and threw himself back in terror against his companion. So exaggerated had seemed his actions



## *Medical Section*

that they reminded me of a poor actor. As I observed his movements, I noticed that he was clutching a towel which he frequently lifted up to cover his face in an apparently hysterical gesture—this, Udai Sing explained, was to keep off the breeze which, to me, was practically non-existent.

Whenever he was touched by cold hands, he reacted violently. His companions, who were many, now told me about his extraordinary behaviour. When his illness had started four days earlier, he had begun to run backwards and forwards like a madman. He had tried to attack people. Now he could no longer walk but dragged his body along the ground.

‘Shall I bring some water?’ suggested Udai.

‘Yes,’ I replied hesitantly, expecting Udai to bring a cup of water. Instead he brought a large stainless-steel bowl full of water. Tilakbahadur threw himself back, away from the water, violently striking the side of the Land-Rover. There was abject terror in his eyes; the water might equally have been a man-eating tiger. Then Udai brought a disposable sputum mug of water. He gingerly placed it near the feet of the poor boy. Tilakbahadur stretched out a shaking hand, and in a violent movement jerked the mug to his lips. As the water touched him, his face exploded into frightful agony and he hurled the sputum mug from his lips, spitting out the water through the back of the Land-Rover. Again, the act had looked so hysterical that I would not have believed it was genuine if I had not suspected what was wrong with the lad. I myself leapt back, with surprising agility for my size, to avoid any contact with the highly contaminated fluid. A little of it sprinkled over my shoes.

Between these violent movements, the boy remained outwardly composed, though his eyes were still permanently dilated with fear. What was I to do? Recently a rabid Tharu man had been nursed by his relatives in a tent. As the orderlies had approached with the anti-rabies vaccine, the man, maddened by the terrible virus, had spat his rabid saliva in their faces. They had already had to suffer the prophylactic course of the injections; they couldn’t conceivably be asked to go through all this again. But I hadn’t been through all this myself. Perhaps, I thought, I might

## *Rabies*

be able to keep him alive if I could at least slip a transfusion needle into one of his veins and keep him hydrated. I could then give the anti-rabies vaccine injections; but then, I myself would also have to have the injections, which frequently make people too ill to work. I made a quick estimate. I would have to perform about four hundred operations in the last three months I still had to serve in Nepal. Would it be fair to jeopardise my own health and therefore indirectly the health of hundreds of people, for the sake of one boy who was bound to die anyway? I sent him away.

Without a shadow of a doubt, in the circumstances, it was the only thing I could do. It was the right and proper decision, yet I hated myself for taking it.

'No one, not even in England or America, can save the boy,' I quietly informed an elderly man who had come up with him.

He didn't believe me. 'But I have seen a man recover in this very hospital following injections,' he protested defiantly.

'That is possible,' I replied, 'but it couldn't have been established rabies. I will, however, inject the relatives who have been close to him.'

They weren't interested and simply drove off.

Later that afternoon I heard from a relative that they had taken him to Biratnager hospital where they had paid for a private consultation. They had been willing to pay up to a thousand rupees for his treatment (£50), a really fantastic sum for Nepal.

'Did they give him an injection?' I queried.

'No,' was the reply, 'just tablets.'

'Did they admit him?'

'No, they sent him back to the village from whence he had come.'

Tablets, I thought, how cruel! He couldn't take a drop of water, how could he swallow a pill?

Still, was that any more cruel than my action in giving him nothing? The pills, even though I knew he could never swallow them, did represent hope—hope of some kind.

'Let me know what happens to the lad,' I sighed.

I injected the relative, free, from my dwindling stock of the precious vaccine.

## *Medical Section*

Life in Nepal is hard; it was particularly hard on the conscience of a doctor doing his utmost for a people he could hardly even converse with. It had been a hard, depressing week, ending finally with the tragedy of Tilakbahadur.

Next day I saw the man who had been holding the lad down. He was clean and tidy, and had an open, sensible-looking face which I now recognised.

'I've met you before yesterday?' I asked.

'Yes,' he replied, 'you delivered my wife.'

Slowly it all came back. His wife had come to the hospital completely exhausted, having been in labour three days. It was her first baby. I had to perform a most difficult forceps delivery to save her little boy. There was no doubt that the 'Malaya' hospital had saved both the mother's and the baby's life, for otherwise she would have died from an obstructed labour. I then remembered how my hands had ached with the strain of pulling the baby out.

The man's name was Shri Prasad; he was the only relative to have come into really close contact with the rabid saliva. In addition the boy had torn the flesh over Shri Prasad's wrists when he had been restrained during one of his bouts of terror.

Shri Prasad explained why they had not killed the dog at once, as soon as they had known that it was diseased. Two months earlier they had bought the large Alsatian for 185 rupees. Now, there had been a rabid dog in the village and four cows had been bitten and subsequently had died of the disease. No one had actually seen the Alsatian bitten, though he assumed that it must have been infected at the same time. (Incidentally, the title 'Shri' is used as a title of respect. The King is known as Shri Pancha which means five, so that his title is Shri, Shri, Shri, Shri, Shri Mahendra. Apparently one well-known minister claimed to be Shri one hundred and eight times!)

'What would they do now?' I asked.

There was a man in a distant village who was reputed to be able to cure rabies by giving his patients a concoction which caused them to vomit so profusely that they rid themselves of the disease.

Tilakbahadur was duly taken to the village, fully expecting a similar cure. . . .

## Osteomyelitis

For days Mukte hugged and hugged his swollen red thigh close up to him, in an attempt to relieve the awful throbbing pain of acute osteomyelitis. Soon he could not even bear to touch it for, if he did, it was like an electric wire going through him. He cried out when anyone came near him, fearful that they might touch his leg. Soon he couldn't even bear the kapok bedspread to be in contact with his skin.

The infection spread throughout his body and Mukte relapsed into a merciful coma. Finally, when he appeared to be at death's door, the abscess in his thigh burst and pus poured out of his leg and his life was saved . . . but what a life!

His hip never straightened from the position he had hugged it in, nor did the thigh ever stop discharging pus. For two long years Mukte just sat in his house; he never walked a step in all this time, he was plagued by the flies which were attracted by his festering flesh.

Ironically enough, 'Mukte' means 'freedom'.

Eleven-year-old Mukte was the eldest in his family. He had three younger brothers and two younger sisters. His family were very good to him and over the two years had spent a fortune on witch doctors in a pathetic attempt to cure him. Mukte told me that they had spent a thousand rupees but I have no idea how they could have got hold of so much money, for it is equivalent to £50.

Green leaves and a paste made of certain roots were applied to his thigh. Finally *gandak*, a foul-smelling green paste, prepared from the leaves and the bark of a certain tree, was pushed into the holes of his leg with wooden spatulae; but all to no avail. The witch doctors had failed, the money was exhausted. What hope was there? Perhaps the white man's hospital?

When the boy arrived at my out-patients, he looked more like

## *Medical Section*

six than thirteen. I X-rayed his thigh at once. I could see immediately that there was a very great deal I could offer. Over six inches of his thigh-bone, the femur, was dead and it was this that was causing the thigh to continue to fester. The dead bone was acting as a foreign body.

Mukte's body had already done its best to cover this dead bone, for a large bridge of solid new bone had grown down alongside the dead bone. This meant that I could probably remove the dead bone without the thigh-bone breaking. Should a fracture occur, then union might never happen.

I reassured Mukte's father that I could certainly help the discharging leg but could promise nothing for the bent-up knee. Little did I guess that due to my operation, Mukte was going to be as close to death for a second time, closer even perhaps than he had been up in the hills. . . .

The operation went very smoothly and I removed the great chunk of sequestrum—that is, the dead bone. I did not suture the wound because I knew that if I did I might well be suturing in bacteria. Further infection was the last thing I wanted.

I filled the wound with the antiseptic flavine. I next soaked a large gauze pack in this antiseptic and with it gently packed the wound. I bandaged up his thigh securely and then I started to manipulate his deformed knee. I knew this knee joint must be almost completely stiffened because the infection from the thigh-bone had burst into the knee joint two whole years ago. He had thus suffered from an untreated septic arthritis of the knee joint for two years.

Although I had to do it very, very carefully, I was most relieved that I could manipulate his knee at all. The X-ray had shown what I had suspected, that the bones were virtually ghost bones; these we term osteoporotic, the bones had become thin from disease. In addition, there was no need at all for Mukte's body to possess strong limbs, when they hadn't been used for over two years.

As I gently pulled the leg out into a more normal position, I was desperately anxious in case I heard a loud crack, for either the thin new femur or the thin diseased tibia could as easily have snapped as the adhesions inside the knee joint. True, there were

## *Osteomyelitis*

a number of cracks, but these fortunately were only due to the adhesions. I had managed to get the leg to within thirty degrees of the straight position. There I stopped for I knew that he must eventually develop a completely stiff knee, which he would not be able to bend at all. This angle would be the best for climbing the foothills of the Himalayas.

I felt very happy. But not for long.

Next day he shot a temperature of 104°F, even though I had prescribed heavy doses of antibiotics. All this tugging and pulling on his leg had flooded his circulation with bacteria. He had septicaemia. I increased the dosage of the antibiotics further and three days later his temperature had settled.

Were his worries over? He looked very pale but his haemoglobin was 64 per cent, a reasonable enough level for a Nepalese, especially for Mukte. Chronic osteomyelitis takes a tremendous amount out of the body, with all the loss of protein in the pus. In addition the liver, spleen and kidneys become damaged by a complication called amyloidosis.

'Doctor, come quickly!' was the message which interrupted my morning out-patients. I came very quickly, to find Mukte looking as pale as a ghost with the bottom of his bed blocked up high. This is the way to increase the blood return to the heart, the correct management for shock. The sister was administering oxygen. My heart missed a beat. Surely he couldn't be dead? No—his heart was still beating but so feebly and so rapidly that it wouldn't be beating for long.

I knew, as I held the transfusion needle over the only visible vein, that if the needle didn't go smoothly into the vein the first time, he would be dead, for with shock the veins collapse and then it may be very difficult to get a needle into them. If there was any delay at all, Mukte would no longer be with us.

The needle went in perfectly and I poured in some dextrose fluid as fast as if I had turned on a tap. Mukte's pulse became a little stronger. I now turned my attention to his other arm and found another vein and set up a second transfusion of the sugar solution. Now, with two transfusions going flat out, I could assess the situation properly for the first time.

## *Medical Section*

It was simple, he had suffered a very severe haemorrhage from his diseased leg. By applying further tighter bandages the haemorrhage was soon under control. I gave him two pints of blood from my precious store and he recovered.

Some days later, when I was confident that most of the sepsis had drained away, I sutured up his leg. Three weeks after his admission he was on crutches. He was still desperately weak, not only from what he had been through in these three weeks, but because he had not even stood up for over two years.

I found my Nepalese patients slower to understand crutches than any other race in the world and Mukte was to be no exception. It took him literally weeks to get the hang of them but when eventually he did, his morale was sky high.

I put his leg in plaster-of-Paris to keep the knee in its optimum position. I explained again to him that he would never be able to bend his knee. He refused to believe me. To my surprise, when I removed his plaster for good, three months after he had started walking with the crutches, he had a few degrees of painless movement in his knee after all.

His knee still discharged pus and he needed further antibiotics, but gradually it became stronger and cleaner, though I had to bring him back into hospital to curette out the sinuses on two further occasions.

I knew that we had done a great deal for his leg but I became very sad when I could not cure him completely. He always seemed to be so happy and whenever I asked him how he was, he invariably replied, 'Better'.

One day, I knew, the sinuses must dry up. But even at this stage, in his eyes we had performed a miracle. He could now walk, albeit on crutches; but he could still walk.

Phulmaya was twenty-two years old when I first saw her shuffling through my surgery door. She couldn't walk, she dragged herself along the ground, her sari covering her deformities although nothing could hide her posture. Her head was only three feet off the ground. I quickly picked her up and laid her on my couch.

She was a very beautiful girl indeed, certainly one of the prettiest

## *Osteomyelitis*

Nepalese patients I had under my care. The Nepalese are not usually beautiful, by western standards, yet Phulmaya certainly was. Thirteen years ago, when she was only nine, she had cut her knee on a stone. The knee had become so painful and swollen that she only obtained relief when she hugged the knee up tightly under her, just as Mukte had with his thigh.

Every day the witch doctor came to see her and applied local herbs to her knee. The pain was agonising until finally the abscess had burst. The relief from the pain was wonderful, but pus continued to discharge from sinuses that had developed on both sides of her knee. The swelling of her knee settled but only after six long months. It took three years for the sinuses to dry up. By that time her knee had locked solidly in the useless bent-up position under her. In the last five years she had been shuffling along with this gruesome deformity.

Phulmaya lived in the village of Taplejung, five days' walk from the B.M.H. She was the eldest in the family having four younger brothers and one sister. Already one of her brothers and her sister were married. Phulmaya knew that she could never marry with this deformity. Her father, an ex-soldier, was now a farmer working his paddy fields and keeping buffalo. Phulmaya spent her days looking after her younger brothers; she told me, with great embarrassment, that she really was a good cook but she was best at making millet rakshi. It had been with this that her family had paid for the services of the witch doctor, when she had been so ill.

I asked her outright if she had a boy-friend or husband in view but, because of her terrible deformity, she had never even let the thought pass through her mind; no man would even consider her.

As I examined her, I found that her knee was so tightly bent up that I couldn't even get my hand between her thigh and the leg. The knee was absolutely solid with no movement in it at all. The old scars of the healed-up sinuses were the proof of her suffering.

I wrote on the out-patient card, which we called the Army Form F.Med.5: 'Awful problem—still I feel I have to operate.'

'I'll try,' I told her, 'but please, no promises, no promises at all.'



## *Medical Section*

I watched her leave the consulting-room on her good leg and her two hands, after I had lifted her down from the couch.

‘Oh what horrible problems we have in Nepal!’ I sighed for the umpteenth time. ‘If only she had come earlier. . . .’

A fortnight elapsed before I could even manage to find a bed for her. The following day I operated. Somehow I managed to apply a tourniquet. I started at her toes and, using a rubber bandage type tourniquet called an Esmarch, I slowly squeezed all the blood out of her deformed leg. I tied the tourniquet tightly round the top of her thigh. In Nepal, I couldn’t afford to lose a drop of blood if I could possibly avoid it. I used tourniquets whenever it was practical.

I incised the skin straight down and over her knee and discarded her useless kneecap. I next cut out a huge wedge of bone from her knee and slowly, ever so slowly, pulled the leg straight. I was terrified of damaging the vital blood vessels and nerves which must have contracted down in length in these nine sad years. Even the enormous segment I had cut out was not enough to get the leg sufficiently straight. I had to cut another and yet another wedge. Finally I had the leg in the ideal position, at 160 degrees. By now the femur so overlapped the tibia that I was left with a large shelf of thigh bone. This I soon cut off with my saw until finally I was very pleased with my carpentry! I held the two bones together with three long screws, applied a bandage over the whole area and removed the tourniquet.

Now normally when a tourniquet has been released, blood rushes back into the limb at a tremendous rate. It not only replaces the blood that had originally been squeezed away with the application of the tourniquet but also markedly increases, for a few minutes, in order to wash away all the waste products that have been formed by the cells of the limb during the period when they had no blood supply. Cells continue to function even in the absence of any blood circulation, for many hours. I had expected Phulmaya’s skin to become fiery red and warm.

I gazed anxiously at her leg for just these signs but the leg remained cold and white just as if I had never even removed the tourniquet.

## *Osteomyelitis*

My heart missed a beat! Dear God, I thought, I must have stretched those arteries just a little too much. I will now probably have to perform an amputation.

But surely she is better off without a leg than with that bent-up deformed structure? I tried to reason with my conscience.

There were three things I could do. The first was to undo the operation and put the leg back as it was, hoping that the arteries would overcome their spasm. I could then try again to straighten the leg. Alternatively, I could do another operation, this time on the back of the knee, to dissect out the main artery and inject local anaesthetic all around it, as this can often relieve the spasm in the artery. Or I could simply pray.

I am a very selfish Christian and I tend to pray to God only in circumstances where I really do need help. This seemed to be quite often in Nepal.

As I removed Phulmaya's bandages I prayed. Her toes slowly, ever so slowly, became pink again; the arteries had recovered, her leg was saved.

The next problem was, would it heal in this new position? When I took the sutures out a fortnight later, the wound had healed perfectly. I now put on a huge plaster that extended from her ankles right up to her waist; this was called a hip spica.

I kept Phulmaya in this plaster for the whole of April, May, June and the first two weeks of July. These are the hottest and most unpleasant months of the year in Nepal; not only is it unbearably hot but the humidity, during the monsoon, is at its maximum. Phulmaya just had to lie and sweat it out in this plaster; it must have been like wearing a straight-jacket in an oven. She stuck it out, she had to.

After these three and a half months, the bones had healed soundly so I cut off the plaster and gave her some crutches. She now had to relearn to walk, not having done so properly for thirteen years.

It was then that she made her first complaint. Why couldn't she bend her knee?

Two years in Nepal have taught me a lot of humility. Until that

## *Medical Section*

moment, I thought I had performed a brilliant operation. I had already conveniently forgotten my desperate appeal for Divine intervention, when Phulmaya's circulation had been so slow to return. Even my anaesthetist had said: 'Not bad, not bad at all,' as he sucked his pipe during the coffee break after the operation. This, for him, was praise indeed. Yet, such was the faith of this young girl in the 'Malayan' hospital that she not only expected to walk again but she assumed she would have a normal knee as well.

A fortnight later she actually started weight bearing, and though she still experienced some pain in her wound during these next few weeks, and though her ankle became swollen due to this unusual dependent position of her leg, these were mere teething troubles and were soon over.

She really did begin to look very lovely at this stage. I thought, at the time, that it was due to her morale being so high as she could now walk erect. I was wrong; it was probably because her morals had become so low.

I saw her some three months later, about a year after we had first met. She gave me her usual dazzling smile and an attractive *namaste*.

'Are you married?' I asked her suddenly.

'Yes.' She blushed.

'How long for?' I asked, amused.

'Five months,' was the reply.

I looked back through my notes. She must have got married almost as soon as I had taken her plaster off. I thought, naughtily, that there would have been little point in marrying before.

'What is your husband's name?' I asked.

She was now covered in confusion, she couldn't remember.

'Are you going to have a baby?' I asked.

'She's one month overdue,' whispered Esther, who knew everything.

So that same day we discharged Phulmaya from my surgical clinic and invited her to attend the ante-natal clinic instead!

As she walked out of the room, I could hardly tell which leg was the stiff one.

## *Osteomyelitis*

It was one of my happiest moments in Nepal.

The news spread to the local villages. I was soon to have to repeat this operation several more times and the patients were all, without exception, as happy and contented as Phulmaya, but none, I regret, was as pretty.

## Goitre

The Bahuns were our least popular patients. They were cunning, artful, and, as they were the money-lenders, they were therefore the richest tribe. They were full of moans, and it was much more likely that a Bahun would attend the B.M.H. unnecessarily than a member of any other tribe.

There was, however, nothing neurotic about Churamani, who had the most enormous goitre I have ever seen, nor was there anything cowardly or ungrateful about him. For, having been at death's door, only to be snatched back by the alacrity and skill of my anaesthetist, and, having remained desperately ill for two or three days, he never once grumbled nor stopped singing our praises. It proved to me how stupid it is to generalise about races or tribes—it is only the individual who counts.

Churamani's enormous goitre had grown most rapidly in the past six years until it looked like a built-in muffler. It was slowly strangling him. In the previous three months he had even lost his voice, so that he could only talk in a whisper. He knew he didn't have long to live, and when he heard about the B.M.H. from a traveller from Dharan, he decided to try his luck—he wanted, he told me later, to live, if possible, just another two or three years.

Churamani came from the little village of Phoyak which consisted of about a hundred houses. This was in Terhathum District, three days' walk from Dharan. He had lived there all his fifty-three years and now shared his house with his two daughters and three sons. He owned a little land and a tiny farm containing a *bhaisi* (buffalo), three *gay* (cows) and three *bhakra* (goats).

All his life he and the whole village had drunk from what appeared to them to be a little spring of crystal-clear water. However, two or three thousand feet higher was another village, and

## *Goitre*

even though this spring water looked so pure, it is probable that it had been contaminated by the people climbing up from Phoyak to this next village. They had probably defaecated too near to the source of the water.

Not all the inhabitants of the village had goitres but there were at least three others with large goitres, though none so large as Churamani's. I must say I felt relieved when I heard this.

Churamani looked an old man for fifty-three, yet there were still a dozen older than he in the village. This was quite exceptional. I first saw him when I was holding the Villagers' clinic on the last day before my holiday. My relief surgeon, from Singapore, was with me and I asked him if he would like to operate on Churamani, but he, being wiser than I am, politely declined. So I sent Churamani back to his village with three months' supply of iodine in the hope that the goitre would shrink a little on this medicine. I gave him iron tablets to enrich his blood. I had to make him as fit as possible. He was obviously going to need a big operation.

Three months later he returned, exactly when I had told him to. His haemoglobin was 88 per cent, really a very good level for Nepal. His goitre, however, was no smaller; in fact it had even grown a little.

My anaesthetist was not too happy about his condition, for the goitre was pressing hard against the windpipe (trachea). The air entry to his lungs was poor. This was aggravated by the fact that much of the goitre was like an iceberg in that it could not be seen as it had extended down behind his breast bone for three inches. It was what is termed a retrosternal goitre. As this was a mechanical obstruction, we could do little to improve his air entry before the operation; only by removing the thyroid could this be improved. After four days on penicillin, to kill any bacteria that might be present in his lungs, I took him to the theatre and we meticulously removed most of the enormous goitre—leaving him just sufficient thyroid tissue to produce the necessary hormone for a normal life. I cleared his windpipe of any vestige of this thyroid tissue and I removed the extension behind the sternum.

It had taken me three hours of the most careful dissection and

## *Medical Section*

the operation had gone very smoothly with surprisingly little blood loss.

We had no actual recovery ward in the hospital so Jim, my anaesthetist, always kept the post-operative cases in the theatre corridor until they were fully awake. This he did with Churamani.

However, at the same time the maternity sister had got into difficulties with a breech delivery and had called me urgently from the theatre to assist her. It is much safer to have an anaesthetist present, to give an anaesthetic for the possible forceps delivery of the after-coming head of the breech. For that reason, Jim came along as well, gave the necessary anaesthetic, and we delivered a fine little boy.

Meanwhile, Churamani had been taken back to the ward.

I had gone over for my lunch and that was the moment when Jim saved Churamani's life. For he found him in the ward, blue with cyanosis and gasping for breath. Respiratory drugs were administered with no effect, his colour worsened as each breath became rasping and laboured. Jim ran to the theatre, collected a laryngoscope and an anaesthetic tube, which he passed through the vocal cords into the trachea. Churamani's condition improved immediately.

Meanwhile, a nurse had informed me that all was not well. We took Churamani back to the theatre and I opened up his neck, exposed his trachea and performed a tracheostomy by cutting out a window in this, his windpipe. His colour improved still further.

It was difficult at first to be certain what had happened. Finally we realised that the pressure of this huge goitre over the years had so softened the walls of his trachea that, without the additional support of the thyroid tissue, the trachea had collapsed, so that poor Churamani had been unable to breathe in sufficient oxygen; he had turned blue.

Next day we taught him to speak, which he could do by placing a finger over the hole in the tracheostomy tube. Every day he got stronger. On the fifth day I was able to remove the tube altogether. From that moment on he never looked back. Nature is a truly wonderful healer. I never cease to be amazed how quickly the hole in the neck, left by the tracheostomy tube, will close. This

## Goitre

emergency operation had hardly even affected the cosmetic appearance of the collar-line incision I had used to remove the goitre.

He was so grateful and always cheerful—and smiling, saluting me each time I entered the ward with a *namaste*. He told me that his village would no longer be able to recognise him without his goitre and that he would now send down the other three sufferers to the B.M.H. to have their goitres removed as well! On the day he left he sent us this letter:

To: Senior Medical Officer,  
British Military Hospital,  
Dharan.

Sir,

I come from East Nepal, Terhathum. I am a poor man, in addition, I was suffering from cough and swelling of neck since Nepali Year 2018. Since 21 Nepali Year I was even unable to work. Fortunately I happened to overhear that this kind of disease was cured here, in this hospital.

I was examined here in the last year and given appointment to come to the hospital this year for in-patient treatment. I did so.

Now, I am cured without any pain or trouble. I felt heavenly comfort in this Hospital. I feel that I am re-born now for which I express my sincere thanks towards the doctors, sisters and all the staffs. And also, I would like to thank the government which established the camp here.

Today I am discharged from the Hospital with my new life, I am very happy indeed. Again, I am sincerely thanking you in writing for your kindness. Please accept it.

At last I pray that I may not be forgotten by this Camp.

Sincerely,

Churamani  
Terhathum

I saw Churamani again, some three months later. At first I didn't even recognise him—he looked so tall and healthy. I studied his face carefully. 'I know your face well,' I said, 'but I can't remember your trouble.'



## *Medical Section*

He smiled and showed me a practically invisible scar in his neck! Then it all flooded back. I didn't need the case notes in front of me to remind me of what we had both been through. What was so gratifying now was that there wasn't a trace of his original goitre and he had gained a lot of weight. For now he could breathe while he ate. The goitre was no longer pressing on his gullet and the food passed easily down. Even that was not all—his voice had practically returned to normal. There was no longer any pressure on the vital nerves in the neck. These are called the recurrent laryngeal nerves—without which we cannot speak. His only complaint was a slight cough for which I gave him some linctus.

Everyone in the village had been amazed at his recovery. He was additionally grateful that I had charged him nothing, but then he didn't know that we never charged even a pice. He said I was very kind. He was right to be grateful, for the strain of those crucial minutes before I had successfully performed the life-saving tracheotomy, must have taken several months off my own life. He told me that he was now in his second life and was therefore very happy. How nearly true he was with this statement, for he had surely been snatched back from the valley of death by the alacrity of my anaesthetist, and no one could have been nearer completing their original life than Churamani.

He told me that before coming here he had fully expected to be dead within a year—but now he was looking forward to twenty to twenty-five years of new life. I told him I thought he would indeed live those twenty-five years, and he left me saying, 'I will never forget you all my life.'

My seeing him again had made a very happy five minutes interlude in a day in which I had already seen 150 patients, performed ten operations, and up till then had felt pretty low and exhausted.

A goitre is an enlargement of the thyroid gland in the neck. Normally the gland is not visible except sometimes in young girls when, in the few years following puberty, the thyroid may become temporarily enlarged.

In Nepal, goitre develops because of the combination of lack of iodine in the diet or drinking water with some degree of

## Goitre

contamination. In addition, certain vegetables, including cabbage, help to contribute to the increase in size of the thyroid gland.

Goitre is most common in land-locked countries for here sea fish, perhaps the commonest source of iodine, may not be part of the diet. Goitre used to occur in the Swiss Alps and even in Derbyshire where it was known as 'Derbyshire neck'. It was first noticed in Switzerland that villagers living at the higher altitudes appeared to be immune from goitre in spite of lack of iodine. Nearer the foot of the mountains the number suffering with goitre increased. One explanation is that the village above contaminated the drinking water of the one below. At the lowest village, the water was so badly contaminated that the goitre incidence was at its highest.

In certain areas the Nepalese had discovered for themselves that their water was the probable cause of their goitres. They called these sources *gadde padhera* (goitre pond). However, as there was often no alternative source, there was little they could do about it. There is a village, a day's walk from Dharan, where the three hundred inhabitants, including the old and the babies, all have goitres. There, their source was an oozing spring.

Before visiting Nepal, I had never seen babies actually born with goitres. In Dharan this was a fairly commonplace event. Usually the mother had some degree of goitre though sometimes, extraordinarily enough, her neck would have been perfectly smooth and apparently normal. Though I used to treat these babies, and their mothers, with iodine, the infantile goitre took a long time to disappear. Too severe a lack of iodine in a baby will result in a mentally deficient child called a cretin.

There are a number of superstitions about goitre. Some villagers believe that they are lucky, others that the nodules on their goitres are in actual fact pockets of wealth and may even contain gold. Naturally it is these people who never wish to part company with their goitres. Others believe that, if they undergo an operation on their goitres, they will lose their voices. However, none of the people I questioned would like actually to marry a person with a goitre because they would be frightened that they themselves would catch the disease and pass it down to the children. Nor

## *Medical Section*

would these people willingly share a communal plate of rice with a person sporting a goitre, because they felt that they might run the risk of catching the disease.

Witch doctors do a fine trade with their goitre patients. They collect leaves from the jungle, soak them in water and rub them on their patients' necks. Next they wrap up certain herbs in a piece of cloth to form a *buti* which the sufferers must wear round their necks.

It is practically a universal habit amongst the goitre sufferers that, should they inadvertently touch their necks, they must blow on their finger-tips immediately—as we do on a cold day at home. By this act they help to dispel the evil spirits that have caused the goitre to grow in the first place, and they pray that the goitre will eventually diminish in size.

Although goitres can diminish by taking ten drops of iodine three times a day, one patient showed no improvement at all on this regime. I later discovered that she was rubbing it on her neck instead of taking it by mouth.

Goitre could readily be eradicated from Nepal by simply adding iodine to the ordinary salt that is sold in the markets. This would then be called iodised salt. It would cost comparatively little yet save these people a great deal of suffering. Though it would cost only a small amount, the Nepalese Government cannot yet afford such a scheme. One day, someone will foot the bill and, by doing so, will do a great service to these hill people.

PART FOUR

# Violence and Accidents





## Robbers and Murderers

After his three-year tour in the Far East, the Gurkha soldier returns for six months' long leave. Occasionally he is never heard of again, not because he has deserted, for desertion is terribly rare, but because of some hazard in the hills.

Rifleman Lالبahadur was nearly such a victim. He had returned for his long leave, after serving in Malaya. He had been in the army nearly seven years and was now returning to his home, for an arranged marriage to a girl he had never met.

He had flown from Singapore to Calcutta in a Boeing 707—thousands of miles in only a few hours—and then travelled from Barrackpore, Calcutta, to Biratnager by train, five hundred odd miles in twenty-four hours; now he was to travel perhaps thirty miles as the crow flies, but these would take him six days' hard walk across the undulating hills and mountains of Nepal.

Faced with this long walk, he delayed three fateful days at Phusre, where he was robbed of 1,600 Nepalese rupees—£80—three years' savings, a huge sum of money for a hillman. Lالبahadur already owned a house and three oxen; he was going to buy much more land with this money. It was to be an investment for when his service was completed.

He reported the loss to the police in Dharan, adding that he suspected a certain man. There was now little else he could do, so he walked home alone, a dejected man, via Dhankuta and Terhathum. Love was no longer in his heart. On this six-day trek he must have been shadowed by the thief who was worried in case he had been recognised.

Lالبahadur actually did the six-day journey to Yelung village, Taplejung, No. 5 district, in five days, but superstition is so deeply ingrained into the Nepalese that he believed that if he arrived that night, being a Tuesday, some misfortune would befall him.

## *Violence and Accidents*

So, barely an hour's walk from his village, he made his bed by the side of the road. In the morning he would arrive back in his village—what a reception! What a lot to do after three long years. What a lot of rakshi they would consume. Also he would be arriving on a Wednesday and all would be well. But fate is no believer in superstition. The thief struck! He had crept up, lifted an enormous boulder and hurled it at Lalbahadur's sleeping face. Blood was everywhere. Lalbahadur was left for dead. Indeed, he was practically dead; for seven days he remained unconscious.

He had been found next morning by a passing porter. Lalbahadur was still breathing. The porter picked up Lalbahadur's basket and carried it into the next village, Lalbahadur's own village. Some men hastened forth and carried the unconscious man back to their home, where they washed the blood from his face; then, to their horror, they recognised Lalbahadur.

They carried him to the near-by mission hospital where for seven days he hovered between life and death. His face had been severely lacerated by the ragged surface of the boulder; these wounds were repaired by the doctor.

Lalbahadur finally recovered sufficiently to be carried by two porters to the B.M.H. His basket had been returned to him; nothing was missing from it. It had contained his personal effects, his shoes and two *tola* of gold. The thief had simply been set on murdering him to remove the only witness of his crime. He was not interested in further theft.

Lalbahadur never saw his bride-to-be. He reported the attempted murder to the police and the suspected assailant was arrested and thrown into prison, prior to any court hearing.

There was little I could offer Lalbahadur for, by the time I first saw him, his injuries were already three weeks old. The boulder had landed between his eyes, crunching the base of his nose and forehead. The resulting flattened area further accentuated his mongolian features. Fortunately for him he was living in the one part of the world where this appearance didn't really matter. His wounds had healed and, though they might one day require some future plastic surgery, this need not even be considered for a year—for even the most fearful scars can heal and fade amazingly in

## *Robbers and Murderers*

time, especially on the face where the blood supply is so good.

Half his teeth were shattered, so we would refer him to a dentist on his return to Singapore to cap these teeth. His mandible, or lower jaw, was broken but was already uniting in a satisfactory position.

To attempt to elevate his depressed forehead after three weeks would have been of little value.

Why hadn't the boulder smashed his head like an Easter egg? He had been saved by the monsoon; the rain had made the earth on which he was lying, soft and giving, so that the blow had hammered his head into the wet soil, leaving a large dent in the ground, while his brain had mercifully only been severely concussed.

Five months later I saw Lalbahadur again. He was looking amazingly fit though still very despondent about life. His wounds had healed wonderfully well and, apart from his teeth, there was nothing else that had to be done for him.

The root of his nose was still depressed and he looked more like a Chinese now than a Nepalese hillman. Still, in a few days he would be on the way to Malaya, where a large proportion of the population are Chinese and no one would know the difference!

The latest news was that he had regained 350 of the stolen rupees and the thief was still securely in gaol. Had he got married after all? Yes, but not to the girl he had set out to marry! He was loath to give me further details, so I didn't press him for them.

The higher-ranking Gurkha soldier may save from 3,000 to 8,000 rupees in his tour. This is such a tempting sum of money that each year three or four soldiers are robbed, not only of their savings, like Lalbahadur, but also of their kit, clothes and all the treasures they had bought in the Far East—transistor radios, black umbrellas and hurricane lamps being the most sought after.

The porters are the most likely assailants, yet the unfortunate soldier has no option but to risk them, when coming home loaded from abroad. The soldiers try to travel together. The porters, like taxi drivers at airports, often charge quite prohibitive rates; twenty Nepalese rupees a day may be charged for their services when the demand outweighs the supply, a common event when



## *Violence and Accidents*

the air lifts are in full swing in the spring and autumn and a lot of soldiers are returning home, heavily laden, with large families and often with young babies.

One of the most sickening, sadistic and premeditated murders I have ever had the misfortune to become involved in occurred in Nepal. It all happened a few days before the Dashera festivities, the nearest Nepalese equivalent to our Christmas.



Six people were living in that fated house. The mother, Echhimaya, had spent the day cooking delicacies for the holiday. She had been helped by her twenty-two-year-old daughter, Lachhimidevi, while her daughter-in-law, Harkamaya, who was expecting her third baby in about a month, had been looking after five-year-old Krishnabahadur and his two-year-old sister, Sankermaya.

Their house, which consisted in the main of just one large all-purpose room, was built on stilts like so many of the Nepalese homes. So Lachhimidevi had to be always on the look out in case little Sankermaya ventured too near the edge.

Echhimaya's menfolk had been away all day, some six miles distant, working on some land where they were grazing cows and buffalo. Her husband, Kharkabahadur, decided it was his turn

## *Robbers and Murderers*

to watch the cattle that night, so, before dusk, he had sent his twenty-two-year-old son, Jagatbahadur, back to the home to keep the women company.

Kharkabahadur's house stood alone. Not far away were the little huts where the cowherds lived, for these little boys looked after some water buffalo. Kharkabahadur was known to be a wealthy man. They did have neighbours, other farmers, but the nearest house was a couple of hundred yards away.

The thieves waited until all was quiet, the last light had been extinguished and until everyone was asleep. Then they struck. They scrambled up the wooden stilts like monkeys and invaded the house from all directions.

Echhimaya was stabbed twice in the back as she had been the first to stir and had sat up. The thieves ripped her large gold earrings from her, the gold necklace from her neck; finally her wrist watch and gold ring were clawed away.

As Lachhimidevi woke up, she was caught a vicious swipe across the forehead with a wooden stave and went out like a light. She wore no jewellery and was not molested further.

Meanwhile, Jagatbahadur had woken and leapt to his feet. What could the poor boy do? He had no weapons, only his bare arms. There were six assailants. He lasted only a few gruesome seconds. Knives were plunged into each side of his chest, one piercing his heart. As he fell, mortally wounded, his assailant struck again, stabbing deep into his neck. Finally, as he lay on the ground, they plunged their knives into his eyes. . . .

Harkamaya woke screaming in the middle of this ghastly nightmare. Three pairs of arms picked her up bodily, as if she were a sack of potatoes, and hurled her off the side of the house. There she lay on the ground below, a huddled mass, heavy with child. She didn't stir.

The two young children, as only children can, miraculously slept through this ghastly furore. Then all was quiet, the murderers had gone.

Echhimaya dragged herself up from the pool of blood she was lying in. Somehow she managed to get to her feet and stumbled over to the steps. She knew she must get help.

## *Violence and Accidents*

But the little boy cowherds had heard the noise and come to investigate. Echhimaya whispered the awful news. The boys sped to the neighbouring houses and help and light soon arrived.

The neighbours found Harkamaya under the house. She was still warm and when they brought a light, they found she was still breathing. Some rakshi was forced between her lips and she was carried gently back into the house.

Jagatbahadur was stone dead. There was no trace of the robbers. Nothing else could be done that night. The police and the B.M.H. were both two days' journey away, far too perilous a journey to start in the dark. Everything had to wait until dawn. Men stayed in the house that night to protect and comfort the wailing women.

Dawn came and now the number one priority was a proper funeral for Jagatbahadur, who had been a very hard-working man all his life and had now died so valiantly against such terrific odds.

One of the cowherds had raced off well before dawn to tell the terrible news to Jagatbahadur's father. Poor Kharkabahadur! He couldn't take it. He was so aghast that he himself collapsed and had to be carried, in a basket, back to the house by a neighbour. There he was left, in his miserable dejected condition, in charge of—or, more likely, in the charge of—the little children.

The remainder of the family took Jagatbahadur's body in a bullock cart to the Kosi river where they built a huge funeral pyre. It had not been raining for several days and the wood was so dry that it caught like tinder and Jagatbahadur's brave remains finally collapsed into the Kosi, with the remnants of the fire, on its last journey down the Kosi to the Ganges and to a better life.

It was not until this was done, that they visited the little mission hospital at Halesha, where powder was liberally rubbed into their wounds and injections were given. Echhimaya had two stab wounds in her back. The blades had entered close to her spine and were angled towards her heart. One rib was fractured with the force of the blow which had pierced deeply into the lung, causing a large blood clot to form in the lung itself, sufficient to seal off the hole so no air escaped. She had had quite a considerable internal haemorrhage, with about two pints of blood

## *Robbers and Murderers*

spilt into her pleural space. The knives had missed the vital organs; she would live.

I decided not to tamper with her chest; after such operations as the removal of part of the lung or even the removal of a whole lung, the space fills up temporarily with blood which does no harm; there was no point in taking the blood away as infection might enter her chest with the needle. All I had to do was to give antibiotics to sterilise the spilt blood, for I hated to think what else that knife might have been used for.

A few days later Echhimaya was at least mobile and could go out to the toilet alone, without the assistance of a nurse. X-rays showed, however, that her haemorrhage had increased somewhat, and she was still running a fever. This worried me considerably. An empyema (pus in the chest) is a nasty complication.

Lachhimidevi, whom I had been able to treat as an out-patient, arrived with some interesting news. One of the murderers was in prison in Biratnager, though how he had been caught, she did not know. Harkamaya had been delivered five days later of a little premature girl, but both were well; Harkamaya had had no serious complications from her fall.

Fate decided that the family had suffered enough. Echhimaya's temperature settled and the blood in her chest began to absorb. Lachhimidevi's wounds healed and her headaches eased. I was able to send them both back to their home, confident that they would make an uneventful recovery.

If only I could also have erased from their minds the memory of that terrible night. . . .

## Blood

The reason why operations are so safe these days, compared with, say, thirty years ago, is threefold. It is the new anaesthetics and the skill of the anaesthetists who administer them, the antibiotics and blood. It is not, I regret to add, due to any increased skill of us, the surgeons.

In Nepal, I had the necessary anaesthetic agents, I had excellent anaesthetists and I had the more commonly used antibiotics, but what made our work so worrying was the lack of blood. In this chapter, I will illustrate some of the frustrations we had to suffer.

A Tharu man had fallen off his house while he had been repairing the roof. He had planned to complete the job before the imminent drenching monsoon. He had broken his hip bone in the fall, so that his leg lay useless and twisted with the outside of his foot lying against the ground. In great pain, he was carried into the house. After moaning there in agony for two days, it became only too apparent to his relatives that he greatly needed help.

We admitted him into the B.M.H. where an X-ray showed that his fracture could best be reduced and held by a McLoughlin nail and plate. A nail is first driven up the middle of the neck of the femur, while a plate is subsequently screwed to the shaft of the bone. The two strong pieces of metal are held together, as will then be the fracture, by a large bolt. Quite a lot of muscle has to be divided during such an operation, so that it is possible for the patient to lose a couple of pints of blood. Blood should always be available. All this I tried to explain to his relatives. We took a sample of blood from each of them, asking only those whose blood was compatible with that of the Tharu man, to donate blood. During these preliminary tests, quite a hubbub rose from the relatives. Ignoring all this, I led the selected men to the room which we normally use to take blood. However, as we reached the

## Blood

door they informed me that they had been in contact with their gods who had, most conveniently for the donors, apparently informed them that they were not related closely enough to the Tharu to give him their blood and that, anyway, they must be off at once! So it was that they departed.

Next day, however, much to my surprise, they returned to the pathology department. With them they had brought two live chickens.

'Kill these and use the blood for our friend,' they gravely requested.

'I'm afraid this won't be any use,' my technician had unwisely told them. Silly man, he should have taken the chickens anyway!

Quite undaunted they returned the following day, this time with a goat. 'This has much more blood in it,' they said. 'Surely this is enough. . . .'

I had to use a couple of pints of blood from my precious store. The Tharu had his operation and just three weeks later was happily swinging along on his crutches, now almost completely free of pain.

What would have happened if we had used the chicken's or the goat's blood? If the man had even managed to survive the shock of all this foreign protein flooding his circulation, he would have still died. His body would immediately have rejected these animal red cells by destroying them all. The resulting debris would have so clogged up his kidneys that he would have died within ten days from renal failure. His only hope would then have been an artificial kidney and there were precious few of these in the whole of Asia, let alone in Nepal.

Yoktamaya was only thirty yet, when I first saw her, she looked well over fifty. She arrived at the B.M.H. right in the middle of my Thursday post-natal clinic, with a letter from the *panchayat*, the headman, of Dharan, requesting treatment. As she was wheeled in on a stretcher, I could see at once that she was terribly ill. Her temperature was 102 °F, her pulse was feeble at 104 beats a minute and her breathing was both rapid and laboured.

She had already been ill for sixteen days.

Yoktamaya had such severe diarrhoea that by the time she

## *Violence and Accidents*

arrived at the B.M.H. her stools had turned to water. She complained of a splitting headache and that the room appeared to be spinning round and round. In the past three days a large tender lump had appeared in her abdomen, extending down from under the right rib cage.

As I examined her, I realised at once what must have happened. A gallstone had become impacted in the duct draining the gall-bladder and so obstructed the flow of bile. The gall-bladder had swelled up while the wall had become inflamed and tender. It was now simply a bag of pus which could burst at any moment.

As I questioned her further, she told me how, ten months earlier, she had been yellow. At that time a stone must have passed from her gall-bladder into her bile duct, temporarily blocking it, to cause jaundice. Subsequently the stone must have passed through into the duodenum with the jaundice fading as the obstruction was cleared. This time, however, the stone had been too large to pass naturally, and so it had obstructed the gall-bladder instead.

As I examined her further, I felt an enlarged spleen. I realised that she probably also had typhoid fever. As I examined her lungs, I noticed that the air entry was poor and what air movement I could hear was full of squeaks. She therefore had either pneumonia or tuberculosis as well. This certainly accounted for the rapid breathing.

I immediately sent off a sample of her blood for examination. Typhoid fever was confirmed. In addition to all this, the blood showed that she had, of course, the inevitable worms. A chest X-ray confirmed advanced tuberculosis. The X-ray of the abdomen showed the outline of the enlarged gall-bladder.

Yoktamaya had typhoid fever, advanced pulmonary tuberculosis, worms, gallstones, and finally a secondary complication of gallstones, an obstructed and possibly gangrenous gall-bladder.

Her haemoglobin was 60 per cent, a good enough level for a Nepalese, but certainly not an ideal level to fight all these conditions. Her blood group was 'A'. No relative had come with her. She needed an early operation as the gall-bladder could burst at

## *Blood*

any moment. There was the usual paucity of blood in the hospital. But I knew one person who was perfectly fit, who had had inoculations against typhoid fever and whose blood therefore could help fight that disease. That person had a strong resistance to tuberculosis, so again his blood could help that infection. That person had, only a week earlier, been presented with a little daughter called Rachel Louise and was naturally very happy and contented with his lot. That person was myself. So that same afternoon I donated a pint of blood. This was cross-matched with Yoktamaya's and found to be compatible and therefore safe to give. Meanwhile I prescribed chloramphenicol, a truly life-saving drug where typhoid fever is concerned. I went to see her later that afternoon, after my blood had been taken. She was kneeling up in bed with her head on a pillow, sobbing with pain. This was the only position she could find that would ease the awful discomfort, if only slightly. In that posture the gall-bladder was not actually in contact with the abdominal wall, where the peritoneum lay, with all its sensitive nerves.

Next day, before my operating list, I examined her again. Our luck was holding, the gall-bladder had still not burst. She was third on my operating list. I had first to remove a torn cartilage from the knee of a Nepalese army captain, the result of a football injury. I then had to remove the lower half of the kneecap of a poor pensioner. He had slipped and snapped this bone while up in the hills a month earlier and had limped down to the B.M.H. to seek help. Surgeons should always do the 'clean' cases before tackling anything which might be septic, so that there is no risk of cross-infection.

The only tricky part in removing a torn cartilage from the knee is detaching the back of this moon-shaped piece of gristle. It was just this moment that the sister had to choose to walk into the theatre to tell me that Ranjit, the administrative officer, was on the phone. Yoktamaya's husband was in his office and had refused permission to allow his wife to undergo the operation.

I was furious, not least, I must confess, because I had given her my own blood. I was fully aware that this was a selfish thought, but it made me none the less livid.



## *Violence and Accidents*

'Ask Ranjit what would happen if I simply get on with the operation?' I told the sister.

'Well, she's the secretary of the Women's Association in Nepal,' came the reply. 'There could be trouble.'

'O.K.,' I snapped. 'She need not have her operation, and what is more, she can go home now, at once.'

Poor Yoktamaya, oblivious to all this, was lying in her bed dressed in a theatre gown. A tube had been passed into her stomach through her nose to keep the stomach empty for the operation. She was lying fast asleep from the effects of the pre-medication.

'What a life!' I thought. Only the day before I had had to decide who was least ill and could be discharged from the ward in order to find Yoktamaya a bed. Now this was happening!

The husband is the all-powerful in the Nepalese home. What he says is law.

'But he doesn't mind her receiving treatment,' came a worried message.

'Bad luck!' I snapped, having finished the meniscectomy by now and being on the phone myself. 'Tell the ambulance to wait outside reception, give Yoktamaya back her own clothes and she can go home by ambulance, now. What is more, I will not even send her home with any medicine,' I added cruelly.

Halfway through the second operation, the phone went again. By now I was hating myself for my bad temper, but there were times when this brutal approach was the only answer. This was one of them. It might work. The husband signed the consent form. Would we now please consider keeping her in hospital? implored the poor man.

Yoktamaya never knew any of this; she had not even been given her clothes; the nurses had let her sleep peacefully behind the screens, and she came to the theatre still asleep and pain free for the first time in ninety-six hours, due to the pain-killing effects of the pre-medication, the pethidine.

As I scrubbed my hands, I had some doubts about the wisdom of performing such an operation. She was incredibly ill. Should I not have treated her conservatively with drugs, in the presence

## Blood

of typhoid fever? Her husband had been terrified at the thought of her undergoing an operation. Had he consulted the witch doctors? Had they foretold some disaster? Could they really foretell the future?

By now I was all gowned up ready to proceed with the operation but Yoktamaya was still in the anaesthetic room. What was keeping the anaesthetist, I wondered.

The minutes ticked by; still there was no sign of Yoktamaya. Fresh worries flooded through my mind. Surely she hadn't died under the anaesthetic? I had been waiting forty minutes to operate. I had planned not only to have finished the operation in that time but to be drinking my mid-morning coffee.

At last I couldn't stand the suspense any longer. I burst into the anaesthetic room. 'Anything wrong, Jim?' I asked.

'Well, she's all right,' he muttered grudgingly, 'only I can't get the left lung to expand.' He added that he had originally suspected that his endotracheal tube, the anaesthetic tube that is passed into the windpipe, might have been too long so that, not only had it passed right down through the trachea but from there it had actually entered one of the two main divisions or bronchi. If this had happened he could only have been pumping oxygen into one lung while completely obstructing the other. He had therefore passed a shorter tube but her condition had only marginally improved. This was, however, sufficient improvement to allow me to remove the gall-bladder. The actual operation went beautifully; the gall-bladder with its offending stone was out and the wound repaired in just over half-an-hour. Only then did we realise just why he couldn't fully inflate her lungs. It was the tuberculosis; it had made the left lung almost solid.

When I had finished the remainder of my operating list I went to visit Yoktamaya back in the ward. She gave me a polite *namaste*, even though she had a transfusion going into one of her wrists!

'How do you feel?' I asked her.

'Better,' came the reply. 'When do I have the operation?'

'You have had it,' I smiled.

Disbelievingly she felt her abdomen. She lifted the bedclothes and saw that in fact she had! Her face flooded with gratitude and

## *Violence and Accidents*

relief. With a smile she immediately went to sleep. Now she had only three diseases left to treat.

Next day I checked her haemoglobin; it had jumped from 60 per cent to 80 per cent on my blood alone, in spite of her having had a cholecystectomy. What a gratifying result. She never turned a hair in her post-operative period.

When I saw her at my out-patients', a fortnight later, she looked the picture of health and even brought an eighteen-month child for good measure for me to see and treat as well.

'Did you know that your husband would not give his consent to the operation?' I asked her.

'I was too ill to know what was going on,' she rightly replied.

'But you know now,' I continued.

'Yes,' came the reply. He and her whole family had been certain that if she had an operation in her weak condition, she would certainly have died.

'What do they think now?'

'They think you are a god,' she said simply.

I couldn't help but feel a little elated that afternoon, even though I realised that I was still rated as one of the lesser gods!

Whether the Nepalese will donate their blood or not, depends often on their tribe. The Bahuns and Chettris were most loath to spill a drop of their precious blood in the need of others. At other times, as many as twenty might arrive with a relative and each would duly offer one ounce. However, in spite of this, it was much easier to have an ill Bahun as a patient for, though his relatives flatly refused to give their own blood, they had the money, persuasion and know-how to get blood somehow, whether it was by threat or bribery. For this reason an ill Bahun would be more likely to receive blood than a member of any other tribe. Such a situation was illustrated oddly enough by a Rai.

Young Birkbahadur Rai, an eighteen-year-old lad, had been cutting down branches for leaves, near the agricultural farm some ten miles from the B.M.H., at a place called Tarara. He and two other lads had been hard at work. Each boy had earned the princely sum of fifteen shillings a month, plus their food and clothing. They were also looking after five buffaloes belonging to

## *Blood*

the farmer who was a Bahun. Birkbahadur had finally cut off all the reasonably sized branches from the tree he was in, allowing them simply to fall to the ground. As he climbed down the tree, he slipped and sustained, in a twelve-foot fall, what to me is one of the most sickening injuries that can occur.

As he fell his legs were astride. One of the cut branches caught Birkbahadur between his open legs and, like a spear, had entered his body through the inside of his left thigh. His two friends pulled out the branch. The resulting haemorrhage was so alarming that they had had to rip off their cheap cloth clothes and use them as bandages in order to staunch the flow. The pain they must have caused Birkbahadur as they pulled out the branch need not be described.

One of the boys raced to the owner's house and collected the Bahun. He put Birkbahadur in a bullock cart and brought him back to the house. From there he was driven in a truck to the B.M.H. Though he had taken some five hours to arrive at the B.M.H. his general condition was remarkably good. I had no idea how deeply the branch had entered the boy, so I warned the two men who had come with him that Birkbahadur would need blood. They were extremely shaken by this request. One was the Bahun and the other was his nephew. A Bahun to give blood to a serf, a mere Rai. . . !

We guided the protesting men to the laboratory, to part with their blood; suddenly the Bahun collapsed on the ground, rolling around in agony.

'I am far too ill to give my blood,' he gasped.

My orderly, with remarkable insight into the Bahun's distress, picked up my stethoscope and listened to the Bahun's heart.

'Ho, ho!' he said. 'This is wonderful! This stethoscope says that you are ill because the lad is ill and will not be able to work for you. That means your blood is the right group for Birkbahadur. Your blood will save his life, for your body is ill in sympathy for him.'

At this, the Bahun leapt to his feet crying: 'Now I am better!'

Both the owner and his nephew made a rapid retreat from the B.M.H. We let them go—after they had promised that they would

## *Violence and Accidents*

bring other donors. This they did. Next day Birkbahadur's two poor little tree-cutting colleagues duly arrived and gave him their blood. In fact, we did not have to use it for Birkbahadur after all. In the theatre I felt a large piece of wood that was still under the skin of his abdomen. It was a horrible sensation. I extended the incision from the wound in his thigh right across the groin until I reached the wood I could feel through the skin. What had happened was soon apparent. The boys had pulled out the branch but the bark had been left behind and this was what I was feeling. I next laid open the channel that the branch had tunnelled through Birkbahadur. When I had done this, a wound ran from his thigh right up to his chest, an astonishingly long track. As he had fallen his muscles had tightened up like a board and the sharp end of the branch had entered his body in the loosest plane, between the muscle and the skin. No serious damage had occurred. I removed every piece of bark and dirt and then cut away all the bruised and dirty tissues. I even cut away the edges of the groin wound until everything was perfectly clean and tidy as a surgical wound should be. Next, I repaired the enormous incision with little metal clips, so that by the time I had finished it looked more like a railway line than a surgical wound.

Ten days later, the wounds had healed so well that he was able to go home, though I advised him against any further tree climbing, for the time being at least.

This story demonstrates the magical power of the stethoscope . . . and how the Bahuns always get their blood!

# River Crossing



During the monsoon, river crossing becomes both hazardous and dangerous. The rivers swell into raging torrents so that a boat would immediately capsize and be smashed to pieces on the submerged rocks with total loss of life. There are a few bridges but these are mostly flimsy, home-made rope contraptions, constructed from the bark of trees. There is one rope to walk on with a couple of hand ropes, all held together with branches. These 'bridges' sway ominously and are frightfully dangerous, yet the sure-footed porters, even when they are heavily laden, cross as confidently as we might London Bridge. Sometimes hooligans slash the supports, resulting in a detour of many miles to find another crossing. There

## *Violence and Accidents*

are better bridges on the main trade routes, but these too suffer from a combination of neglect (a national weakness) and the fearful assaults of the elements—howling gales and flooding rain. Most river crossing has therefore to be done by foot, using fords, but even here the level of water may well reach shoulder height. The swiftly-flowing current makes each step hazardous. The river-beds are strewn with rocks so that it is easy to stumble and, with the heavy loads on men's backs, such a stumble could well prove fatal. When the water is as deep as this, men try only to cross in a group, clinging to each other for support. Even so, there is much loss of life, both human and cattle. These hill people have no alternative but to cross the rivers. They must get food.

There is yet another hazard, which may follow recent heavy rain higher up the mountains. This hazard is known as *bhal* and is almost as frightening to hear as to witness. Should an unwary traveller be caught by the *bhal* he will certainly die, for if not dashed to pieces like the boat, he will at least be drowned. With a noise like a train going through a tunnel, a torrent of water, like a tidal wave, forces its way down the river increasing the height of the water by several feet. Anything in its path is doomed.

After heavy rain, the level of the water may take two or three days to abate sufficiently to permit any kind of crossing, either safe or hazardous. Frequently, as there is no alternative route, the traveller must just simply sit and wait. But sitting and waiting and sitting and doing apparently nothing, seems to be an integral part of the life of the Nepalese. In my two years in Nepal, with my western ideas over punctuality, hurry, bustle and of never wasting a minute of the day, I found the Nepalese lethargy terribly frustrating, yet I expect, in return, they found my western energy equally or probably even more irritating.

The leeches in the water add to the unpleasantness of monsoon travel. These bloodthirsty creatures fix their heads painlessly into the traveller's flesh and suck up so much blood that their bodies become grotesquely swollen and bloated. If the leeches are then pulled off, their heads will remain behind, resulting in probable continued haemorrhage from the site, with the subsequent

## *River Crossing*

formation of an unpleasant sore. Leeches are easily removed by applying a glowing cigarette to their tails, putting on salt or spraying them with insecticide. Apart from their repulsive appearance, these leeches do little harm to the European, but to the anaemic Nepalese, already grossly infested by hookworm, the additional loss of blood, caused by a number of leeches, may have a detrimental effect on the health of the sufferer. The Nepalese have their own method of ridding themselves of these pests. They prepare a little bag of salt and chillies, which they tie to the end of a short stick. They then simply touch the attached leech with the bag. The leech drops off immediately. Tobacco can also be used for the same purpose.

There is a really most unpleasant complication from these leeches. Little mountain springs provide the Nepalese with their drinking water. They either plunge their faces straight into the water or drink from their cupped hands. In either manner, their noses may enter the water. Thus, quite unknown to the villager, a leech may enter the nostril with the result that the insect actually lives in the back of the nose causing recurrent sneezing and nose bleeds. Worst of all by far, however, is a horrible sensation of crawling in the head. The nose is, surprisingly, a comparatively large, complicated structure internally and the leech has plenty of room in which to crawl around. The sufferer becomes convinced that the leech is actually crawling in his brain. The man may quite easily be unaware that a leech is even the cause of his symptoms, until perhaps told by an observer that it is protruding out of his nostril. The Nepalese try to rid themselves of this particular pest by taking tobacco snuff.

Once a poor woman came to the reception in a pathetic state, saying that the leech in her nose was driving her mad. She explained how she could attract the leech to her nostril by lifting up a saucer of water to her nose, only for it to disappear again at the merest flicker of the water. Udai Sing decided to try to trick the leech out by running a tap against her nose. Sure enough the leech peeped out and Udai immediately grabbed it with a pair of surgical forceps, pulling out an eight-inch-long swollen leech. Her gratitude was indescribable.



## *Violence and Accidents*

Water buffalo are also plagued by leeches and I have felt desperately sorry for these beasts whenever I saw a leech protruding from their enormous nostrils.

Leeches can be determined little creatures. One of my colleagues once saw one on the ground while he was resting during a trek. He picked up a short stick and watched the leech rapidly climb up the stick, bowing up its body, attached only by its head and tail in the process. The leech moved very quickly. My friend kept turning the stick round and round, so that the poor leech was proceeding from one end of the stick to the other, getting nowhere at all. However, the leech was to have the last laugh as the officer was distracted momentarily when spoken to by a passing Gurkha; the next second the leech had disappeared! He discovered it five miles further on, when, on removing his shoes, he found that one sock was full of blood.

For many months the river crossings caused me no surgical problems; either the Gurkhas crossed over safely or they simply drowned; either way there was no problem. There is, however, another ingenious method of crossing rivers by means of the *ghirling*; this did cause me problems. Two different strands of wire-rope have been slung across some of the rivers, usually high above the water. A basket, containing the passengers, is then winched across the river. Occasionally this has to be done by the passengers. The basket runs down the wire from the high bank by gravity until it reaches the centre of the wire; then the occupants have to pull the basket up the other side of the river with their hands. It must require immense strength and well-developed callosities, otherwise their hands would be severely blistered by the wire. I doubt very much whether I would have had the strength to pull my weight across.

During the monsoon, the wire may rust and the repeated use of this method of river crossing adds such a burden to the *ghirling* that occasionally the wire will snap, with disastrous consequences; but again, regrettably, there was nothing I could do for this type of accident either.

The number of people in a basket depends very much on its size but, as during the rush hour on the London Underground,

## *River Crossing*

this space does not deter people from crushing and crowding themselves in.

Dalbahadur lived in Bhojpur and was crossing the Kosi river on his way to Dharan. He was trying to recover some money he had lent. This was 100 rupees, for him quite a considerable sum, being a little under £5. He was making this five-day journey simply to recover it. He had lent the money to a neighbour who had since left the village for Dharan. Dalbahadur had subsequently learnt from a relative of the debtor that the man had no intention ever of returning and had settled down permanently in Dharan. The old man was on his way to find out if this was indeed true and to demand repayment of the money.

Now Dalbahadur was seventy-six and very hard of hearing. As usual, far too many people, six in fact, had crowded into the basket. The basket swayed and shuddered its way across the swirling, angry waters. These six travellers were also carrying their own baskets; it was a terrible crush inside the ghirling. Now before Dalbahadur had even entered the ghirling, he had been warned not to touch the wire-rope but, being deaf, had not heard the warning. Halfway across the water, the ghirling swayed even more alarmingly. Dalbahadur automatically stretched out and grabbed the wire-rope to recover his balance; the metal wheel ground over his clenched hand with a sickening crunch. It was almost as bad as if a train had gone over his hand on a railway line.

The following day poor Dalbahadur came to the B.M.H. with what was left of his crushed and mangled hand. There is little one can do for crushed injuries of the hand, except to clean them up and wait for nature to dictate what will happen next. Certainly, to suture the wound is to court disaster as the sutures further impede the precarious blood supply; infection then becomes inevitable, with all the ghastly consequences. I simply removed part of one of his fingers and prescribed antibiotics and an anti-tetanus injection. He never complained in hospital but the temperature chart spoke for him; it had an ominous swing about it and Dalbahadur's hand began to smell most unpleasantly from beneath the bandages. I took him back to the theatre but by now gangrene had set in. The wheel had not only shattered all the

## *Violence and Accidents*

bones of the fingers but had seriously damaged the arteries. His body was too old at seventy-six to have the powers of recovery of the young. By immediate amputation of all four fingers I was at least able to save the stumps. His thumb was intact and as this is the most important of all the digits, he would still be able to write, after a little practice, and could certainly feed himself. In fact, he still had a useful hand, but what an expensive loan he had made. Next day he appeared much happier, the worst of the pain had gone. My bandages were so large that for a long time he had not realised the severity of his loss. His hand healed perfectly but, though I asked him to return to my out-patients', I never saw him again. I never did find out if he recovered his loan.

Deburam's misfortune was perhaps even sadder, for he was only twenty. He too had left his home at Bhojpur, hoping to join the Nepalese army. He had reached Tribeni and had been the first to enter the little cable basket to cross the Kosi river. Although only designed for about two persons, so many people crowded into it that, at mid-stream, with all the pushing and shoving, Deburam had almost been squeezed out of the basket. His predicament was terrible, for if he had fallen out he would have been drowned at once. In desperation he clutched at the wire to save himself from this ghastly fate. Following the accident, the remainder of the passengers, quiet at last, hauled Deburam back inside the basket to safety. He collapsed unconscious from the sickening pain and terrifying blood loss. At last the basket reached the opposite bank where a Gurkha soldier, also a passenger, bandaged Deburam's hand to staunch the blood flow.

All this happened three days before I saw him, for Deburam had had to rest that period at Tribeni in order to recover sufficiently from the shock and loss of blood to make the day's journey to the hospital. When he finally did arrive at the B.M.H., his clothes were still bespattered with caked blood; he had a tight tourniquet around his wrist, with an even tighter bandage around his fingers. His hand smelt ominously of gangrene. He had been led to the reception by a little dwarf who had befriended him. Deburam had no relatives, no one to donate blood.

I removed his dressings, with little hope of being able to save

## *River Crossing*

his hand and found, to my horror, that his hand had been split down the middle into two, like a lobster's claw. All I could do at first was just to clean off the blood and to try and make Deburam as fit as possible by getting some good food inside him. I ordered anti-tetanus serum and antibiotics, cleaned his hand with the antiseptic Eusol (Edinburgh University's solution of lime) and put his arm in a sling. Next day I removed the obviously dead portions of his fingers and sprayed the rest with Physohex, a really excellent antiseptic. I dressed his wounds twice more under an anaesthetic before I could even begin to repair the cleft. Fortune finally smiled on him. His wounds healed beautifully. He left hospital a month after admission, with the loss of only his middle finger and well-healed skin grafts over the tips of the others. He left, like Solubir after his adventure with a tiger, squeezing one of my old tennis-balls, forcing his fingers to regain their former power. I asked him also to come and see me again, but he too lived five days' journey away: unless it was absolutely essential, he would never face the ghirling trip again. There was nothing else I could offer him anyway, except encouragement.

## Mustard and Stress

Hiralachhi and Hiralakaji were sister and brother. Within three months, a double tragedy struck them both.

I first saw Hiralachhi as she was lying on a stretcher outside reception. She was literally skin and bones, and was infested with flies. It was obvious to me that she was dying and I assumed, from the look of her, that it was from the 'disease of kings', tuberculosis. However, as I was very busy at the time, I first asked for a chest X-ray before I examined her, so certain was I that she had T.B. To my astonishment, the film was absolutely clear of any disease at all. How could it then be that a twenty-six-year-old girl could be so thin? Hiralachhi could only croak a few incoherent syllables, so I turned to her mother, who was moving a fan across her daughter's face to keep off the loathsome flies.

'What happened?' I asked.

Two months earlier Hiralachhi had been living in the capital, Kathmandu. Her husband was a mechanic and their sleeping quarters were more like a garage than a bedroom. Bits of bicycles were scattered everywhere. Lysol was kept in the house to clean the machinery. One disastrous night Hiralachhi stretched out for a glass of water. In her somnolent state she accidentally picked up the lysol. It was midnight, she couldn't see what she was holding. She drank it, at least some of it. . . .

Hiralachhi was unconscious for three days following this disaster. She was taken to a hospital in Kathmandu and kept alive by transfusions. After a little more than a fortnight she was sent home. The hospitals in Nepal are so poorly equipped that there was nothing further they could do for her. Her relatives brought her down to Dharan, where somehow she had survived some fifteen days.

There was no doubting the story. There were raised ugly scars

## *Mustard and Stress*

on her lower lip, where the strong alkali must have poured out of her mouth, as she realised, too late, her ghastly mistake. The lysol had spilt on to her chest causing further vivid purple scars that contrasted strangely with her pale wasted body. Even her poor hands were scarred, as she had clawed at her mouth and throat in her agony, before collapsing into merciful unconsciousness. Her mother went on to tell how Hiralachhi had only been able to eat a little food since her discharge from hospital—the understatement of the year, I felt.

I admitted the pathetic girl into the ward and later that day asked my anaesthetist to examine her. He put her to sleep and what we saw inside her, was even more dismaying than what we had expected from the outside wounds. She must have taken a great gulp of the poison. Her throat had reacted in the same way as one's face would react to an acid attack. Scarring, terrible scarring, had occurred so that only a tiny hole, about a quarter of an inch in diameter, was left as the inside of her throat. Through this tiny hole, Hiralachhi had had to breathe and eat. How she had survived at all was a miracle. We looked carefully through the little hole and tried to make out the larynx, the entrance of the air passages, in front, and the oesophagus, that leads to the stomach, behind.

We planned to pass a tiny tube through the hole down her oesophagus to feed her and so make her strong enough for major surgery. But the only direction the tube would pass was straight down her windpipe. Her condition, poor at the beginning of the operation, was soon beginning to alarm me. The tiny quarter-inch hole had already narrowed down from the bruising caused by our trying to pass various tubes. I realised that soon it would block up completely as a result of the swelling resulting from all this trauma. Then she would be dead.

I wasted no further time and performed a tracheostomy. Then for the first time in two months, air rushed freely into her lungs through the emergency hole I had made in her throat, and that particular disaster was averted. I next threaded a piece of polythene tubing through a large vein in her groin and pushed it into one of the biggest veins in her body, until it almost reached her

## *Violence and Accidents*

heart. Through this tube I fed Hiralachhi for the next eleven days, hoping that the little hole would recover from the bruising. It didn't, and soon Hiralachhi's condition was so serious that she couldn't even swallow the saliva she formed. I then performed a gastrostomy, putting a large rubber tube directly into her stomach through the abdominal wall, so that she could at least be fed on a liquid diet that could be poured through a funnel, down the tube, into her stomach. At the same time we forced open the hole inside her throat, as it had narrowed to a mere one-eighth of an inch in diameter.

A few days later, she could at least swallow water but she had become so anxious that she was severely overbreathing. This produced a condition called tetany, which caused her body to go into spasm and greatly added to her confusion and distress.

Every few days we took Hiralachhi back to the theatre, to dilate her throat a little more, but each time it contracted down again. It was a wearisome battle, not only for the pathetic Hiralachhi but also for us doctors. In between times, we forced her to eat, knowing that every piece of food that passed through the hole would help keep this vital passage open. At last, I thought we had broken through the vicious circle of widening the hole only to be followed by it ending up even narrower than before. I really expected that Hiralachhi would eventually be cured.

The time came when I was to take my leave. I was away a month. I had had no idea how dependent Hiralachhi had been on me. I was in fact doing little for her. My anaesthetist was doing all the hard work, by dilating the little hole, but it was in me, and me alone, that she had all her confidence. She flatly refused any further dilatations, turned very sour towards the doctors and nurses and finally had to be sent home to her mother's care. She was asked to return to the out-patients' a fortnight later but failed to turn up. I was not to see her until nearly two months later, when she and her mother were absolutely desperate.

By then she was as she had been when I had first seen her. The family had tried, unsuccessfully, to push rice down the rubber tube but it would not pass properly. It was far too viscous and thick for the narrow tubing. I changed her tracheostomy and

## *Mustard and Stress*

stomach tubes and arranged for the ambulance to collect her daily so that she could at least have one decent meal each day at the hospital. But these arrangements fell through. Sometimes the ambulance was too busy to collect her, while on other occasions Hiralachhi simply refused to come, feeling too exhausted. So instead I gave the mother two bottles, instructing her to bring them up every day to the ward, where they would be filled with a nutritious liquid meal containing protein in the form of Casilan, milk and raw eggs, with added cocoa, vitamins and iron.

After a few weeks, Hiralachhi's mother no longer came up to the hospital. I felt very despondent, for it was obvious to me that not even the family were prepared to help her now.

It was soon after this that Hirakaji came into hospital. I had no idea until three months later that he was Hiralachhi's brother, not until he asked me for some glucose for his sister. His father had recently died and this partly explained why his mother no longer came for the feeds. Apparently he himself had been too busy to come instead. Hirakaji was twenty-four, two years younger than his sister.

There are a few small factories in this part of Nepal, where rice is dehusked and mustard seed ground to produce oil. In the few I visited I saw how the engine drives a huge completely unprotected belt. We had to deal with several unpleasant injuries resulting from these belts, either from them flying off, breaking—and most looked pretty tatty after years of constant use—or, most commonly, because clothing became caught up in the machine and the victim was dragged into the works.

In Nepal there are no factory laws regarding safe machinery, and even if there were, there is no one to enforce them. The Nepalese clothing is worn so loosely that it courts disaster.

Hirakaji was responsible for the maintenance of the machine in Dharan bazaar and on that tragic day they were again grinding mustard oil. He was wearing a little steel bracelet; he put in his left arm to help to separate the husks from the oil when his bracelet caught up in the machinery, and he was dragged into it.

He screamed with fear and agony. A woman, who had come from a nearby village to have her mustard seeds ground, saw



## *Violence and Accidents*

the ghastly accident, and with the speed and alacrity of a rugby player, threw herself across the room and caught Hirakaji round the waist and dragged him clear. The bracelet snapped and Hirakaji's life was saved. The woman must have been incredibly strong and amazingly quick thinking.

The machine was not even broken! However, the factory had to be closed for the day as Hirakaji and his friend were the only two men who could operate the machine.

A bus was hired by the owner of the mill and Hirakaji was taken to the B.M.H. I saw at once that the poor boy had been dragged into the machine up to his neck, as his forearm had been smashed, resulting in a compound fracture; his upper arm, the humerus, was also broken. In addition he had a huge swelling in his neck from the rupture of a large vessel due to the violence of his accident. None of these injuries mattered, compared with the final assault, a brachial plexus traction injury, the worst injury that the upper limb can suffer.

The movements of the arm are all controlled by nerves. The delicate, fine movements of our fingers all depend on a plexus of nerves that lie deep in the axilla, the armpit. This is one reason why it is so painful to be prodded in the axilla. It explains why tickling the armpits can cause such excruciating discomfort. Hirakaji's nerves had probably been pulled out by their roots, leaving his arm useless though painless. On top of all this he was badly shocked.

I treated him with pethidine, for the pain he still had in his neck, and plastered his broken, paralysed arm. Slowly the swelling in his neck settled and ten days later I was able to suture his wounded arm. Two months later his tissues and bones were well on the way to recovery, but his nerves were still quite dead.

We could only wait and see. . . . Could the nerves have only been concussed? If so, when could they recover? Or had they really been ripped out by their roots? In which case, his arm would be useless to him for the remainder of his years.

I never learned the answer to these queries, as I had to leave Nepal, my time was up. My guess would be that his sister would die and Hirakaji's arm would be useless to him. I could only pray that my guesses were wrong.

## The Asari Thorn

During the months of June and July, I dealt with so many accidents from the asari thorn that one day, in sheer frustration, I told the relatives of a ten-year-old, who had just been brought into my clinic with such a thorn deeply embedded in the sole of his foot, that I would certainly remove it but, being ignorant, I must first know what it was I had to remove.

‘Are there asari trees locally? Would you try to find me a branch?’ I asked.

The uncle of the lad went into the forest and returned within half-an-hour with a small branch which he had cut off with his kukri. He had taken great pains and with obvious pleasure presented me with a suitable branch, which I could hold without getting myself impaled on the vicious thorns. The thorns themselves were only half-an-inch long, but what makes them so lethal is that they appear at the tip of two- or three-inch-long twigs, so that the effect is like a miniature spear. I immediately realised how easy it is for these bare-footed villagers to tread on such a branch, especially when it is hidden in the long monsoon grass and how the thorns would then naturally break off inside the foot.

I would never have bothered to mention them if it hadn’t been for Kalimaya. This extremely attractive twenty-three-year-old had been cutting grass with one of the sickles that the Nepalese women use. These are about one-third the size of the English sickle. She had trodden on the branch of an asari bush. A thorn had transfixed her foot right through the middle of her sole, sticking out through her instep.

Not only had this happened twelve days before she reached us but the poor girl had actually left the thorn where it was inside her foot for three days. After the first two days, her foot had begun to swell. On the third day, when the thorn was finally removed by

## *Violence and Accidents*

a witch doctor, her foot had begun to change colour. The pain was terrible. During all this period she should have been feeding her six-months-old baby but after the first forty-eight hours she became far too ill and her sister had had to take over the care of the baby, feeding it with buffalo milk, which at that time cost  $5\frac{1}{2}$ d. per pound.

Kalimaya prayed to her gods for relief of the pain. In vain she had sacrificed a cock—a brown one because in their haste they could not find a black one. Still, the condition of her foot deteriorated until large blisters had started to form. The witch doctors were called in again. Kalimaya lapsed into delirium. She remained in a semi-comatose condition, neither knowing nor caring what the witch doctors did or said.

By now her husband, thoroughly alarmed, was desperate. He brought her to the B.M.H., partly by bullock cart and partly by bus. When Kalimaya finally arrived, she was moribund.

I did not see her until she was already in a bed in the ward. I asked the nurse to remove the dressing so that I could see the foot, but already I knew the diagnosis. Even as I had entered the ward, I had known at once what the matter was with her, from the smell. It was wet gangrene, the gangrene caused by infection, the awful complication of wounds, before Sir Alexander Fleming's discovery of penicillin. The stench from her foot was so revolting that we had to burn cones of incense in a feeble effort to disguise the smell; even so, it got into the back of our throats.

Poor Kalimaya, to have lived nine days with that smell. Poor husband, to have put up with that ever-increasing malodour as he had watched his wife fading away. Poor baby, no milk.

Even though she was desperately weak and grossly anaemic, I couldn't waste any further time. Both Kalimaya and her husband agreed to let me amputate her leg; anything to stop the pain, anything to stop the stench, anything to stop the gangrene spreading and killing her.

But I didn't. I simply removed the dead half of her foot with my fingers; there was no need for an amputation knife as I had only to cut through the ligaments that held her forefoot to the rest of her leg. I removed further gangrene from the region of

## *The Asari Thorn*

her ankle but preserved all the skin that had a reasonable chance of recovering.

I prescribed penicillin and streptomycin for the wet gangrene and anti-tetanus serum to prevent the occurrence of tetanus, for she was most fortunate that this complication had not already developed; she was also lucky in that she had not acquired gas gangrene. We built up her general resistance to the infection with the help of two pints of blood. After the second dressing under an anaesthetic, all the tissues were recovering, being nice and pink from well-oxygenated blood.

A few days later, she did not even need sedation for her dressings and was happily walking around the ward on crutches. Her life had been saved, the pain and smell had gone, yet she still had her leg—well might she have looked so happy!

My anaesthetist had noticed those particular trees growing on the golf course. In fact he was so concerned for the young bare-footed caddies, in case they might tread on the hidden branches, should he hook the ball from the second tee into the rough, that he always tended to slice the ball! This act of kindness caused his handicap to suffer, as his ball seemed to go out of bounds more often from the second tee than from anywhere else on the course.

Nature has probably supplied the asari thorn with this vicious form of protection to prevent cattle and goats from eating the young shoots when the tree is still young. As the shrub grows into a strong tree, it appears to lose its armoury, being now strong enough to survive on its size alone.

I had read in some of Jim Corbett's books on India, how they built thorn-bush fences to prevent tigers and leopards from entering an area, from a certain direction. I couldn't understand how any thorn bush could prevent a really determined leopard—but having once seen these spikes, I could easily visualise how they could actually kill an animal by piercing straight into its heart.

My next-door-neighbour, a colonel, was the proud owner of two walking-sticks. For years he had used an Irish shillelagh. However, this knobbly stick, with its characteristic bend, so irritated one of the colonel's Gurkha soldiers that one day the

## *Violence and Accidents*

man had exploded: 'Why use that, when we have perfect Nepalese walking-sticks?'

'Ha, ha!' replied the colonel. 'It is the bumps that make the stick.'

Completely undaunted, the soldier produced a highly-polished walking-stick as straight as a die. It was an asari branch. He had cut off the needle-sharp points, leaving the stems which stuck out at least an inch, at a right angle to the stick. It was one of the most interesting walking-sticks I have seen.

## Doctor Sahib the Dentist

About every three months a dental team came up from Singapore to visit the cantonment. They stayed about a fortnight. For the rest of the year I was the dental surgeon. I soon became proficient at pulling out teeth, though I always did this the easy way, by first asking my anaesthetist to put the patient soundly to sleep, so that I never had to be in any hurry over the extraction. The teeth were the easy part of the speciality. I had also to deal with large tumours and extensive osteomyelitis of the jaw, most of which were far more advanced than anything seen by the most experienced dental surgeon in the United Kingdom. However, it was the broken jaws that required the most urgent treatment, which fortunately is very easy.

Forty-eight-year-old Durga was certainly well-to-do by Nepalese standards, as she owned ten cows as well as a couple of buffalo and goats. This, however, was quite a number to feed, for although there was no trouble during the luxuriant growth period of the monsoon season, as soon as the rains dried up, the problem became acute. That year, the monsoon stopped on October 10, just before the Dashera festivities. By the end of the month, grass was already in short supply.

Every day Durga went out into the forest to cut grass for her animals and every day she had to venture a little deeper. The livelihood of her family depended almost entirely on the milk production of her animals, so adequate food had to be found.

On that day, Durga had found grass but it was on a very high bank with a precipitous fall on the other side. She grabbed handfuls of the green grass which she rapidly and expertly cut off close to the ground with her little sickle. For an hour she cut almost non-stop and had nearly filled an old sack with the valuable grass. She stood up to stretch her cramped legs. The movement

## *Violence and Accidents*

was disastrous, she had been standing too near the edge; she slipped on the dew-wet ground and crashed, head first, down the side of the mountain.

That was all she could tell me; she was falling, falling . . . and six days later, when she woke up, she was in the 'Malaya' hospital, in a world quite different from anything she had ever seen before; but her jaw and head were aching terribly.

Evening had fallen on that sad day. Her husband, Kopilamani, returned from working all day in the fields. No food was ready. The children were hungry, anxious and worried. Where was their mother? they pleaded. The animals were restless. They too were hungry.

Kopilamani set out to search for his wife. It was now pitch dark and he was worried about leopards and jackals. But the night was still and it was because of this peace that Kopilamani eventually heard his wife. He couldn't see her but he heard the rasping, irregular breathing. He called out but there was no reply. Fortunately, he was well aware of the proximity of the precipice. He hurried back to his home, only half a mile away, to collect neighbours and hurricane lamps.

How Durga could still be alive, after such a fall, was beyond their comprehension. Indeed, the mere sight of her, in the light of the lamps, must have filled them with terrible dismay. Slowly, ever so slowly, Kopilamani climbed down to reach her. A neighbour hurried back for a rope. Her twisted body lay amongst the rocks; her head had been split open as if it had been struck by an axe. Her body and the adjacent rocks were sticky with blood; her loss had been considerable. Yet she was still alive. Somehow they got her up to the grass. She was gently carried home.

Next morning she was taken to a little mission hospital at Bhojpur, where her terrible wounds were roughly approximated. From Bhojpur she was carried for five days to the British Military Hospital.

The X-rays of her head showed just how seriously she had fractured her skull. The films looked more like a road map of England than a skull! In addition her jaw had been shattered in two places.

## *Doctor Sahib the Dentist*

I operated on her at once. I first manipulated the broken pieces of jaw together. As I closed her mouth, I found that her teeth fitted too perfectly together. I had first to remove one of her teeth to produce a gap through which she could be fed. Next I wired the jaw snugly together and did what I could for her other wounds.

I wired up her jaw by using a thin, pliable, stainless-steel wire, which I cut into six-inch lengths. I next doubled over each wire, twisting the bend to make a little eyelet in the middle of the wire. I prepared eight similar pieces and then threaded the ends of each wire between two adjacent teeth, threading back each end snugly round each tooth. I then twisted the two ends together below the little eyelet. I repeated this process round the matching teeth below, until finally I had two sets of wires in place on each side of the main fracture. It took me a long time as I was not used to this kind of work. Once the wires were in place, the rest was easy enough. I simply had to thread a new piece of wire through the two eyelets, joining the top to the bottom. I twisted this wire round and round until the teeth were solidly together, so that she could no longer open her mouth. Each time I twisted the wire that little bit tighter, I was frightened it would snap! When all four pairs of eyelets had been firmly held together, I tried to move Durga's jaw. I couldn't. The fractures were secured as if by a vice, the jaws were held tightly together, the operation was successful. I was very relieved that I had previously removed a tooth, as it would have been impossible at this stage. All I now had to do, was to bend the sharp ends of the projecting wire back between her teeth, so that her lips would not be torn. An X-ray confirmed that the fractured jaw was in a good position.

When we return patients to the ward following a general anaesthetic, they are always accompanied by trained staff, who carry a mouth gag so that, should the patient vomit, the attendant can open the mouth to allow the vomit to escape. This precaution may prevent the vomit from being inhaled, for this might result in double pneumonia or even death from drowning in the vomit. With Durga, we had to send back wire-cutters in addition, so that



## *Violence and Accidents*

if she had vomited, the restraining wires could be divided, the jaws freed, and the vomit allowed to escape. My anaesthetist was so good however, that only rarely did patients vomit.

For six weeks those wire-cutters stayed by Durga's bed, for at any time it might have been necessary to produce an adequate airway should she have started to choke. Fortunately, no such disaster happened. Next day Durga was happily sucking milk through a polythene straw, through the artificial gap I had given her. Her pain was less than at any time in the previous seven days—not that she could remember, of course. She was terribly hungry. Every day the sister prepared a nutritious fluid meal with eggs and other liquid protein, which Durga sucked up through the tube.

From the frail old woman who had been admitted, she actually gained weight on this fluid diet and looked twenty years younger when she left for home.

It was not often that I received complaints about the food in the hospital, for the B.M.H. is like a five-star hotel to most of the patients. Rice was, of course, the staple diet, with chicken, goat and pork the main meat dishes.

Poor Tejbahadur (aged twenty-eight) had a very healthy appetite, normally managing to eat three times the amount of food that the average patient got through, and that in itself was an incredible amount. What upset Tejbahadur was that he couldn't take part in this twice-daily trenchermanship.

He had climbed one of those incredibly tall sal trees, or rather halfway up one. He had been cutting leaves from the tree for his five goats. When he had finished that job, he climbed yet higher to cut off branches with his kukri as he was making a larger house for the goats. He reached out for a branch which, to his horror, was dead, and crashed to the ground.

Tejbahadur had fallen in the forest near his little village of Itari, fourteen miles from the hospital. It was 9 a.m. and he had reached us at 6.30 p.m. by the usual form of transport, the bullock cart.

He had landed on the side of his head, with such a blow that he

## *Doctor Sahib the Dentist*

had broken his jaw in two places. This is the classical manner in which the lower jaw breaks with direct violence, for the jaw makes a bony circle with the skull and the mandible is usually broken just below the joint of the jaw and through the lower, middle teeth on the opposite side. He had made a proper job of things by also splitting open the flesh over the break. Extraordinarily enough, having taken this colossal blow on the jaw, harder than any heavyweight world champion could ever have dealt him, he was not even unconscious. But here his luck had changed for his thigh bone, the femur, was broken; his right wrist resembled a dinner fork in outline and was dripping blood from what is termed a compound Colles fracture. He was fighting for breath and in agony from a distended bladder, which was due to the fact that the pain of his broken thigh bone and his other injuries were inhibiting the bladder from emptying.

I immediately prescribed antibiotics to prevent infection entering the broken jaw and wrist bones. These were termed 'compound' fractures, as the skin was broken over them. There was a serious risk of bacteria entering into these bones, especially when left unattended for so many hours.

Tejbahadur's general condition was very good but I needed blood for his operations. Six men came up with him. I 'asked' them each to donate a pint of blood. It was now quite late at night so we didn't bother to determine the blood group of the donors but simply took their blood indiscriminately. Almost certainly some of the blood would be of the same group as Tejbahadur's, and those pints which weren't would go into my precious reserve store for some other deserving person who might be left without a donor.

In spite of all his injuries, his haemoglobin was 84 per cent and his group was the very common group 'A', Rhesus Positive. Four of the six pints were compatible with his.

In any British hospital, a surgical team would have operated upon such an injured man. An orthopaedic surgeon would have set his femur, while his house surgeon set and sutured the wrist; the dental surgeon would have attended to the jaw. Ideally this would all have been done as quickly as possible at one emergency

## *Violence and Accidents*

operation. Being entirely alone, I decided to tackle the problems in two stages.

He had fractured his femur towards the upper end of this thigh bone. This is an unfortunate site to break the bone as perfect union is difficult. Strong muscles are attached to the greater trochanter, this being the part of the femur that makes the hips prominent. These muscles pull the upper end of the broken femur out of position; their opposing numbers are attached to the lower portion of the broken bone and cannot therefore counteract this effect.

I opened up the fracture site and exposed the two broken ends of this bone, the longest and strongest in the body. I passed a stainless-steel guide rod up the proximal shaft of the broken bone until I could feel it pointing through the skin just above the greater trochanter. I cut through the tissues on to this point and pushed the exposed rod until several inches were protruding above his hip. I then threaded a carefully selected stainless-steel rod called a Küntscher nail over the guide. This nail was named after a brilliant German surgeon, who had invented the device during the last World War to get wounded German soldiers back into the front line as quickly as possible. The nail slid down around the guide and I hammered it into place down the shaft of the femur. As the nail appeared at the fracture site, I held the two ends of the bone exactly together while Premkedah, my Nepalese theatre orderly, knocked the nail down still further and thus created a perfect internal splint to the bone. Plaster-of-Paris and further supports were now unnecessary to hold the bone.

I then dealt with his wounds and manipulated his broken wrist back into position.

That evening Tejbahadur painfully worked his way through a large bowl of rice, hardly daring even to move his jaws due to the agony of the double fracture.

He had fully recovered from the effects of the nailing by my next operating list, three days later, so I reduced the jaw fractures, put the bones in a perfect position and held them there by those eyelet wires which I have previously described.

Now, most of his pain had gone, yet when I walked round the

## *Doctor Sahib the Dentist*

wards, his face was a picture of abject misery. He was, in fact, one of the most miserable patients I have ever had, yet all his bones were perfectly set and he was recovering well.

Tejbahadur's problem, however, was that he was simply hungry, and every time I came into the ward he beseeched me to remove the wires so that he could have a really good meal. Poor sister! She spent hours preparing his meals and Tejbahadur was consuming vast quantities of milk with a special pure protein food called Casilan dissolved in it. In addition eggs, vitamins and anything else she could think of were added, but still he was miserable.

After a few days I noticed that his jaws were a little loose. Tejbahadur had spent all his time forcing them apart so that he could scrounge any rice that was left by the other patients. Tejbahadur was furious when next day I tightened up those wires.

Nearly six weeks after his admission we sent him home on crutches, asking him to return in a further six weeks to have the wires removed. He did not in fact return until eight weeks had elapsed, when, to my astonishment, his wires had all gone and his jaw, and incidentally his leg, had healed perfectly.

'But who took the wires out?' I asked incredulously.

'The goldsmith,' came the astonishing reply.

Poor Tejbahadur just couldn't stand the hunger any more and three weeks earlier, when he said he had a fever, he had begged his friend, the goldsmith, to remove the wires. The goldsmith, though refusing at first, had finally given in under extreme pressure. It had taken him three hours to take the wires out. Being a good friend and neighbour he had charged nothing. This explained why Tejbahadur had been in no hurry at all to report back to the out-patients'.



PART FIVE

Mainly for Women





## ‘In sorrow, thou shalt bring forth children’

One of the most fascinating things about medicine in Nepal is how certain diseases and injuries occur with the different seasons. Similarly in the obstetric department, the attendances were directly proportional to the various holidays in the year.

One of the most attractive seasons begins at the end of January and the beginning of February. At this time the fields are ablaze with yellow due to the mustard fields being in full bloom. The Nepalese celebrate this time of the year with a festivity called the *Basant Panchami*. This festivity marks and celebrates the beginning of spring. Many Hindu marriages occur during this festivity and, during it, men and women dress in yellow in respect for the mustard crop.

So fertile are the Nepalese women that the ante-natal clinic at the ‘Malayan’ Hospital became very full three or four months later, and as these numbers became even more swollen, as the latecomers arrived, I had complaints that the sheer number of ante-natal patients was disturbing the out-patients’ routine of the hospital. Suddenly by mid-December the attendances at the clinic dropped by nearly half, only to fill the post-natal clinic equally dramatically.

There is a terrifying population problem in Asia and, although there are no figures available for Nepal, it is estimated that the population of neighbouring India is some 500,000,000 and increasing at the rate of 12,000,000 per year. There are many ingenious plans to stem this population explosion but none can work until the population at large has been educated. One plan I heard on the *Indian News*, in July 1967, was to confine families to three and then to sterilise the man; a simple operation called



## *Mainly for Women*

bilateral vasectomy, which takes only about ten minutes to perform. The government would then give him a free transistor radio as compensation for the loss of his fertility.

Pregnant Nepalese women have the same fears about the health of their unborn babies as have other mothers all over the world, but at least the Nepalese women 'know' the cause of some of the disasters that might happen. They 'know', for instance, that if they are unwise enough to eat a goat's tail during pregnancy, then their babies will be born mentally deficient. Folklore has it that if the mother should witness an eclipse of the sun, then the baby is certain to be born with a hare lip.

One of the problems in running the ante-natal clinic at the 'Malayan' hospital was documentation. It would have been useless filing the different women under their surnames, as their surnames were simply the tribe they belonged to. I might have a dozen Rais, or an equal number of Bahuns or Shrestas, attending the clinic on any one day. For this reason we filed them under their first names. Even my wife Anna was filed under 'A' while she was attending my clinic when carrying Rachel. However, few Nepalese refer to each other by their first names; they use terms like Buri for wife, and Loghna for husband. The eldest son is called Jetha, while the eldest daughter is called Jeti; the second son is called Maila, and the second daughter is called Maili; the third son is called Saila, while the third daughter is called Saili. The next son is called Antara and the next Jantara; the youngest is always called Kancha, or Kanchi if it happens to be a girl. A father is called Babu and the mother Amah.

This explained why so many of my ante-natal patients didn't know what their husbands' names were; this situation became even more ludicrous in the case of a girl called Andramaya. Andramaya had attended the ante-natal clinic on at least half-a-dozen occasions but she was always invariably the last patient I saw.

'Why does she always come in last?' I asked Hemlata.

'Because she always forgets her name!' replied Hemlata.

I forgot to ask Hemlata how Andramaya managed to remember her name, even by the end of the clinic, thinking perhaps that she might have had to trudge all the way home in the heat to ask

*'In sorrow, thou shalt bring forth children'*

someone what her name was, so that we could find her documents! Anyway, when I finally heard about her dilemma, I gave her a most precious piece of paper; on it was written 'Andramaya'. All she then had to do was to present this paper to the clerk and not tax her brain any further.



There are also only a limited number of first names, so quite often, these were duplicated; the position was impossible when two women came from the same tribe. I used to get so exasperated when given the wrong notes time after time, that I worked out a little plan that turned out to be foolproof. I made a little sketch, in the corner of the front of the documents, of the patient which illustrated some feature about her; her large earrings, the gold ring in her nose, or the type of bracelet she was wearing. Although they couldn't understand English, they certainly recognised my diagrams, even if they didn't approve of them. They never accepted the wrong documents after this.

## *Mainly for Women*

The women's style of dress at both my maternity and gynaecological clinics was very different from England. Unless the women are very westernised, they never wear any pants. I found this habit extremely useful at my clinics, as no time was wasted over undressing for internal examinations. I often used to wonder whether this form of undress had anything to do with all the free love that occurred in the hills. I never dared ask anyone. In truth, I think it is probably more hygienic for ladies not to wear pants, though this would be hardly practicable in the mini-skirt era. What is gained on the swings is lost on the roundabouts. The time saved by the no-pants rule, was lost by what the women wore round their middles. Before I could perform any adequate examination, I had to wait while they laboriously unwound their *patuka* (binders)—these were often twelve feet long and were particularly tightly applied in any condition of abdominal discomfort. It was always quite a battle to get this off. Hidden in this binder were their little treasures: a little bag of pice, their keys—they locked everything—and their inevitable bidi (cigarettes).

At the clinics, some of the women were so shy that, when I wanted to examine their abdomens, they would hold their hands tightly across the lower part of their tummies—allowing me a few inches of skin only for my inspection. Brassieres are hardly ever worn, yet though they showed little embarrassment about exposing their bosoms to me, they were very shy indeed in front of the male Nepalese orderlies. However, once they were breast feeding, they showed little shyness at all. Essentials came first.

The women simply wear a rag during their periods when, in certain tribes, they are considered unclean. During the period they are permitted neither to cook nor to work. Esther, my Nepalese out-patients' sister, explained to me that this was a reasonable custom, as many women feel wretched during this time with headache, backache as well as abdominal pain.

The Nepalese are very small people, the men are rarely taller than five feet six inches and the women rarely reach five feet. One of the tiniest of my ante-natal patients was Indrapari. She married when she was fourteen and was having her first baby at sixteen.

*'In sorrow, thou shalt bring forth children'*

When a woman is carrying her first baby we call her a *primigravida*. Part of the ante-natal care is examination of the pelvis, which has to be done by an 'internal', in other words an examination through the vagina. During this we make sure that the neck of the womb is healthy, that there are no tumours present in the pelvis that might obstruct the passage of the baby, and we feel the bony points of the pelvis to determine if there is room for the baby to come out. Part of this important examination is to feel for the promontory—that is, the top of the sacrum. If we can actually feel this bony lump, as I could so readily in Indrapari, it suggests that the birth passage is too small for the baby to pass out naturally. As there is therefore little point in distressing the mother by allowing her to go into proper labour, we plan, instead, to perform a Caesarean section to deliver the baby, so that neither the baby's nor the mother's health need be risked by a prolonged obstructed labour.

I first saw Indrapari when she was six months' pregnant. Already she had developed a complication of pregnancy; her blood pressure was raised. Now the normal blood pressure for a Gurkha woman is lower than her English sister's and figures of 90/60 or 100/60 were a good average of those recorded at the hospital. However, Indrapari's blood pressure had risen to 170/110. This is approaching the danger level for it indicates a complication called pre-eclampsia, which means 'sudden flash'. This is a very serious condition, consisting of high blood pressure, swollen body, protein in the urine and fitting—the latter can be fatal. In the stage of pre-eclampsia, it is vital that the woman should rest as much as possible and, as this is rarely possible in the home, all should be admitted to hospital where they are sedated with drugs like phenobarbitone and sparine.

We couldn't admit Indrapari for the simple reason that we had no beds. I treated her as an out-patient with sedatives, but in spite of these her blood pressure slowly climbed up to 190/100 and her legs became swollen, although she had not yet developed any protein in her urine.

With about three weeks to go, before her baby was due, she came over to the hospital one night in a state of great anxiety;

## *Mainly for Women*

her labour had begun, or so she thought. All she was experiencing were the pains when the baby's head starts to descend into the pelvis. Even so, it was then that I advised her to have a Caesarean operation as the afterbirth could well have been damaged by her high blood pressure. She politely but emphatically refused, however. Two weeks later, she told me that three days earlier her waters had ruptured, that she had backache and abdominal pain. These symptoms indicated that labour had truly commenced. I told her that the time had come when she must undergo the operation but she begged me to wait and see what happened. For three days she remained in hospital; her contractions were strong, occurring every three minutes, but the neck of her womb would not dilate. In all that time, it had only opened enough to admit the tips of three of my fingers.

The strain was beginning to tell on her, her pulse rate had crept up from 84 on admission to 120. The baby's heart, however, was beating strongly and constantly at 140. This is an excellent rate for an unborn baby and indicates that the baby, at least, is remaining in good health during the delivery. I decided that she had been through enough. I did not want to rupture her membranes properly as this would have caused the baby's head to descend further into the pelvis and make delivery of the head at Caesarean section more difficult.

She still refused any operation. During the night Indrapari's pulse crept even higher; by now she had been in labour seven days. I insisted on operating. Her husband arrived and told me he wanted to take her home. I explained to him that if she left hospital in her present condition, if she did not die from obstructed labour, she would certainly lose the baby; but they ignored all my advice and her husband carried her away. I heard nothing more. I assumed that she had died.

Nine months later she came to the villagers' out-patients' clinic—needless to say, with some other complaint. I was thrilled to see her; she told me that she had delivered herself of an eight-pound baby just three hours after discharge from the hospital. So much for my internal examination. I would have thought a natural delivery was impossible.

*'In sorrow, thou shalt bring forth children'*

I expect what happened was that, when her membranes had finally burst, the hard head of the baby had pressed against the neck of the womb, which had at last opened up properly for the baby to be born. Both mother and baby made an excellent recovery from this self-confinement. It is also possible that she had found the labour ward, with the European staff, so strange that she was unable to relax, until she got away from these surroundings. I invited her to attend the ante-natal clinic for her next baby, although I guessed that she would manage it equally well at home. Not everyone was as lucky as Indrapari who though she had such a tiny pelvis, had yet been able to deliver her baby normally.

Tikadevi was only sixteen years old and she had been in labour thirteen days with her first and only pregnancy, before she had finally given birth to a still-born baby. She had suffered from what we call cephalo-pelvic disproportion, which means that the baby's head is too big for the pelvis, for at sixteen she was too small to deliver her too large baby. As she had forced her dead baby through the tiny birth canal she had torn a large hole in her bladder. Ever since that day, urine had continuously trickled through her vagina. She had no control over it whatsoever. A most distressing and depressing condition.

Three years later she heard about the 'Malayan' hospital and came down from the hills. Two surgeons had already tried their best to close the hole but each had failed. She had already had three operations on the hole in her vagina and one surgeon had also operated on her through the abdomen, but all had failed.

When I saw her, she was in a miserable, dejected condition. By now her urine had been continuously leaking for five years; she had such a severe infection that stones had formed in her bladder. Her vagina was really too tender to examine, being scarred and contracted after these five years of irritation.

She had recently become a widow. I hadn't the heart to refuse an operation. My first object was to get Tikadevi strong enough for this final, though quite different, operation. Tests on her stools revealed the eggs of worms; I gave her the correct medicine and soon she had passed large round worms which looked like

## *Mainly for Women*

earthworms. I cleared up the infection in her urine with a drug called oxytetracycline, and put her on a low residue diet, containing no vegetables, to keep her guts as empty as possible of any stool. Nine days later her general condition had improved enormously, as also had her morale. All was ready for the operation.

I first cut away the scar of her previous abdominal operation so that she would be left with only the one scar. I then found the ureters, the little tubes that take urine from the kidneys to the bladder. I now dissected out two little tunnels in the wall of her rectum and very carefully and meticulously sutured the tiny little ureters to the large rectum. The anastomosis healed perfectly. For the first time in five years she was able to control her water. No longer would she be plagued by the smell of incontinence.

A mere twelve days after the operation she went home, a happy and contented girl.

I asked her to come and see me again in out-patients' but she didn't appear until nine months later. I asked her why she had bothered to come at all. Well, apparently she had married again four months earlier and now wanted my permission to have a baby! She explained how well she was managing and was very thrilled with herself. She passed her urine four or five times a day quite comfortably through her rectum. She opened her bowels once a day and could readily distinguish the feeling of urine, wind and stools in her rectum.

She looked so happy and well. I told her that she could certainly try to have a baby but that she must come back to this hospital for a Caesarean section because her vagina was too scarred to permit the baby to be born, and anyway her pelvis was too small.

When I last saw her she was two months' pregnant, but her husband had moved to a village, five days' journey away. She promised to come back to the hospital for her confinement. I felt very sad that I couldn't do the Caesarean section for her as by now my two years in Nepal were very nearly over.

Twenty-one-year-old Manmaya demonstrated, with her first pregnancy, some of the horrible complications that can occur in a few unlucky women. Though she was only a poor Nepalese

*'In sorrow, thou shalt bring forth children'*

girl, similar fates may befall any pregnant woman, anywhere in the world, rich or poor, black or white.

Manmaya lived in the flat terai, some fifteen miles from the hospital, a journey through ten miles of dense forest, followed by a further five miles across fields that only a buffalo cart could negotiate in the monsoon, for it was then that her complications had so unfortunately set in. Had a Land-Rover attempted such a journey, it would certainly have sunk up to its axles in deep mud.

She had lived far too far away to attend any of the ante-natal clinics. It was this that nearly cost her her life, for, had she attended regularly, I could, much earlier, have detected the sinister signs of pre-eclampsia: the rising blood pressure, the swollen ankles and protein in the urine. As it was, she delayed her arrival at the hospital until the last possible moment—and that moment was almost too late. By this time her blood pressure was alarmingly high, the frightening level of 190/130.

The blood pressure is produced by a muscular pump; this is the heart. Approximately every second the heart contracts; this phase is called systole and this produces the pulse that can be felt at the wrist. During each contraction, blood is thrust out of the heart into the arteries, at such a pressure that blood will reach every part of the body. Eventually the blood is returned to the heart through the veins. Following each contraction, the heart must relax; this period is called diastole. The blood pressure is recorded as the systolic pressure over the diastolic pressure. This means the contracting pressure of the heart over the relaxed pressure of the heart. Of these two pressures, it is the relaxed or diastolic that is the most significant, for if high it means that there is a continuous strain on the arteries, whereas the systolic pressure, the contracting pressure, causes only an intermittent strain.

An artery, like any tube, can only withstand a certain amount of pressure. Should that level be exceeded, the artery will burst at the weakest point. The weakest point, ironically, often turns out to be the heart muscle itself. The next most common site for a burst artery is in the brain. So the weak links are in the most vital organs of the body.

Not only was Manmaya's blood pressure far too high for her



## *Mainly for Women*

safety, but her legs were swollen like tree trunks. When we tested her urine, it was solid with protein albumin.

I tried to reduce the blood pressure by heavily sedating Manmaya with sodium amytal, hoping that with her asleep most of the day, the pressure would fall. But it remained obstinately high. After two days on this regime I decided that I could no longer risk the possible consequences of such a high blood pressure. I would start her off in labour by means of an artificial induction. This meant that, under heavy sedation, I would pass a sterile gloved finger through the cervix, the neck of the womb, sweep the membranes off the lower part of the womb and finally, by applying an artery forceps to these membranes and giving a little tug, I would rupture them and the waters would be released. Following this labour will usually commence.

I never really liked doing this as I strongly believe that nature is a far better judge of when labour should commence than I will ever be. Nature, in fact, beat me to it. I had planned to rupture the membranes the following day, yet during that same night Manmaya started off in labour.

It was during my operating list next morning that the sister in the maternity ward sent a message down to the theatre saying that Manmaya had now reached that stage in her delivery when the neck of the womb, the cervix, was fully dilated. This implied that all was ready for the beginning of the second stage of labour, when the mother pushes the baby out. Not only had she reached this stage, continued the message, but she had already been in it for two hours! By this time she should have pushed the baby out. She obviously needed urgent assistance by means of a forceps delivery, for it was far too dangerous for Manmaya to push too long and too hard with her blood pressure so high. It was like playing with dynamite, for the straining would cause the pressure to rise still higher, making the risk of a ruptured cerebral artery at least a very alarming possibility.

I was now in a very nasty predicament, for I was in the middle of a terribly difficult operation. A patient had presented with a huge mass of cancer growing out of the left side of her neck. During my efforts to remove it, I had found that it had originated

*'In sorrow, thou shalt bring forth children'*

in her pharynx, deep in the back of her throat. It was already invading the windpipe, her trachea. The cancer had reached enormous dimensions and the operation was extremely hazardous. Every moment the woman's life was in danger, as the cancer had also eaten its way through and between the vital blood vessels. A rough movement, an impatient tug, or even a careless second, might result in an exsanguinating haemorrhage. It was not an ideal moment at all to be presented with Manmaya's problems.

It never rains but it pours. Two minutes later another message arrived, yet a third woman was critically ill. She had just arrived at reception having had, and was still having, a severe haemorrhage as a complication of a three-month abortion. Apparently her pulse was barely palpable.

'Bring her up at once,' I sighed.

This patient was wheeled to the theatre and my anaesthetist left us to set up an infusion on the aborting woman. It was a horrible position to be in, for I should have been attending all three patients at the same time.

First come first served is one of the fairest rules in life. I anxiously continued the first operation, and here alone were enough hazards and worries to last me a long time.

I sent a message to the maternity sister: 'If you perform a very large episiotomy, that may be enough to assist the baby's delivery.' This she did, making a bold cut with strong curved scissors down from the bottom of the vagina, skirting the anal orifice, thus enlarging the outlet considerably. Luck was at last with us; a baby girl was born soon after. Although the high blood pressure had somewhat damaged the placenta, the afterbirth that supplies the baby with nourishment while in its mother's womb, and in spite of the long labour, the baby was remarkably healthy. An hour later, after I had completed the neck operation, I quickly evacuated the womb of the aborting woman. I then ran up to the maternity ward and repaired the large episiotomy incision. I was glad when that hour was over.

I now fully expected Manmaya's blood pressure to return to normal and all to be well. Nearly all cases of pre-eclampsia and eclampsia settle soon after delivery. How wrong I was with my

## *Mainly for Women*

expectations. Manmaya's troubles hadn't even begun. Her blood pressure would just not settle, in spite of the continued heavy sedation, and the very next day her heart began to fail. It just wasn't strong enough to sustain this colossal pressure.

Now the heart, although anatomically one organ, is in fact two different organs having two different functions. The all-powerful left side pumps the blood throughout the body; the weaker right heart, which simply collects the used blood from all the tissues pumps it at a much lower pressure through the lungs, where the blood is purified and oxygenated.

It was the left side of Manmaya's heart that failed, as this was the part of the heart that, virtually alone, had to maintain the colossal pressure. As the left side fails, the lungs become waterlogged with blood. The failing left heart is unable to accept all the blood which is continuously being pushed into it, second or split second after second, minute after minute, hour after hour, day after day. This condition is termed left ventricular failure, as it is the tough strong ventricle, that actually pumps the blood, which finally fails.

It is a most frightening experience for the patient who feels an acute sensation of suffocation. Manmaya tried to cough out the blood from her saturated lungs, resulting in the production of bright red frothy sputum. She had cardiac asthma.

Manmaya suddenly developed all these symptoms one Sunday afternoon. We only saved her life by the immediate administration of morphia which allayed her terrible distress. We next sat her bolt upright in bed, so that gravity would assist her by confining the blood to the lower lobes of her lungs. The upper lobes were then free of the blood. Now she could at last breathe. We now gave her the finest heart tonic ever discovered, foxglove in the form of digoxin. Slowly, ever so slowly, I injected the stimulant into her vein, for it is a highly dangerous drug when given this way, as it can cause death. Time however was our enemy. I had no choice.

We didn't stop her lactating for, though this was an additional strain to her heart, should Manmaya ever recover, her baby, without the mother's milk, would most certainly die. Every four

*'In sorrow, thou shalt bring forth children'*

hours the nurses gently expressed Manmaya's milk to feed the baby, Manmaya being, of course, far too sick to suckle her own babe. Her blood pressure remained obstinately high. The heart was slow to respond to the digoxin.

Manmaya remained desperately ill for six long days, although mercifully she slept most of the time under the very heavy sedation.

Then quite suddenly one day she was dramatically better. Her blood pressure had returned to normal, the digoxin was now working so well that her heart had nearly recovered.

Fate, however, had still not finished with Manmaya. A second sad complication of pregnancy occurred: puerperal psychosis, madness following delivery of the baby. What followed next was both comic and tragic. Our first inkling that all was not well was when, one night, Manmaya complained that she couldn't sleep. The following morning she climbed over the parapet surrounding the ward and ran across the grass, a not inconsiderable performance by a woman dying of heart failure a few days earlier. She was hotly pursued by the nursing sister, who astonished herself as she leapt across the low wall like a high hurdler. Her nurse's cap fell off during the leap and her stockings were laddered by the rough grass. The sister secretly felt amused and quite chuffed with her unexpected athletic accomplishment. It was however no longer funny when, half an hour later, she had to repeat the same performance, especially as this time she had much greater difficulty managing the parapet.

Next Manmaya resorted to hiding under her own and then the other patients' beds. After the nurses had pulled her out from under the beds on numerous occasions, they finally decided to leave her alone; there was too much other work to do in the ward, for, at that time, a little baby had tetanus and was requiring continuous attention. In addition, the nurses were having to cope with a large operating list.

Now the problem was, how to get her home in her present state, for she lived these fifteen miles away and no relatives had stayed with her. Ranjit solved this problem by going down to talk with the patients waiting for the start of the Villagers' clinic that afternoon. They came from all parts of Nepal, someone was

## *Mainly for Women*

bound to have come from or near Manmaya's village. Yes, that someone was found. In addition he had fortunately come by bullock cart. He promised that he would certainly take Manmaya home. The sister explained to him how Manmaya should take her pills. In return I promised to see him promptly at 2 p.m., as soon as I had finished my lunch, for I had had to make all these plans in between the cases on my operating list.

So Manmaya was to go home. We fervently hoped that, by returning her to her normal surroundings, her mental condition would improve. The bullock cart driver recognised her at once, although Manmaya said she did not know him. She even hid under her bed when her husband arrived, quite unexpectedly, a few minutes before she was finally to leave. She said she didn't know him either. Anyway, the three of them, with the baby, disappeared from our view on the bullock cart.

A few days later, I saw the owner of the bullock cart at my follow-up clinic. He told me that Manmaya had completely calmed down almost as soon as she had left the strange world of the B.M.H. She had caused no further disturbance, either on the bullock cart or subsequently at home. She was cured.

The Ventouse vacuum extractor is a wonderfully efficient little machine. It is remarkably simple yet it has saved many lives in Nepal. Its original cost cannot be very much, while the cost of upkeep is absolutely nil as not even electricity is required to run it. It consists of a glass bottle, a pump like a bicycle pump and three sizes of metal cups, one of which is placed on the baby's head. The chosen cup and the pump are connected to the bottle by different pieces of rubber tubing. By pumping, a vacuum is set up in the bottle and thence to the cup. At the desired pressure, the baby can be helped out by the vacuum extractor. It is a practically painless procedure to apply the cup and the Ventouse is a most wonderful aid to the obstetrician, yet I had never even heard of it.

I was attending a young Nepalese doctor, a primigravida having her first baby, when I first learnt about the existence of this machine. Even though the young doctor should have known,

*'In sorrow, thou shalt bring forth children'*

and did know, exactly what to do, she had become so distressed with the agony of childbirth that, instead of taking proper breaths and pushing down hard with each pain, she was crying so much that she could not co-operate with the midwife at all.

I was not unduly disturbed, as the baby's heart was beating strongly at 140 beats per minute and the young doctor's pulse was perfectly steady and strong at 80 beats per minute. I watched her ineffective pushes for ten minutes before she cried out: 'Use the vacuum extractor!'

'We haven't got one,' I replied.

'Then I will die!' she sighed.

Then, for the first time, I took a firm hand on the situation.

'Stop all this moaning and messing about,' I ordered, 'and let's have a really decent push for once.'

She became a little frightened of me and tried to concentrate harder. Meanwhile, I scrubbed my hands, put on an operating gown and gloves and injected a little anaesthetic into her, just as she was pushing, so that, with the pain of the contraction, she was hardly aware of the injection.

'Push!' I shouted. 'Push! Push! Push!'

As the poor girl strained, I cut the area, where I had put in the local anaesthetic, with a pair of scissors. Immediately the outlet of the vagina had so enlarged that a little boy was born a few minutes later. I kept thinking of this vacuum extractor as I repaired the incision, the episiotomy.

Now to me, the important delivery of that year was to be Anna's baby. During the April of that same year I left Dharan for my month's leave. I went to the B.M.H. at Singapore, the armed forces largest hospital in the Far East.

'I want to know all about the Ventouse,' I said to my obstetric consultant friend. He explained it all, and a few months later the Ventouse vacuum extractor arrived in Dharan. However, even when it arrived, I didn't use it. I had learnt to do forceps deliveries and I saw no need for this machine.

By now it was August; our baby was due in September. Second babies are the easiest to deliver, less trouble than any other, or so everyone told me. We were delivering hundreds of babies a

## *Mainly for Women*

year, I seemed to be managing them all right, all the time I was learning and becoming less incompetent. . . . But as the weeks went by, and the time came closer to September 7, when my baby was due, so did a pain in my tummy get worse. I was developing indigestion. Was I actually getting an ulcer worrying about the delivery? I had sent a letter to my obstetric friend in Singapore some weeks earlier, saying that Anna was quite happy about having her baby here in Nepal. If she had gone to Singapore for this confinement, she would have been away from James for three and a half months. (The rules are, that army wives are not allowed to travel in a military plane within eight weeks of their confinement, to minimise the chance of the baby being born on the plane. In addition they are not allowed to travel by air for four weeks after the delivery, possibly as the baby's ears have not developed enough, in these first four weeks of life, to withstand the changes of pressure in modern flights.)

Suddenly, quite out of the blue, a signal arrived, a colonel was coming up to deliver Anna! My pain disappeared like magic. It has never since appeared. I had never consciously been aware of being so worried about delivering my own wife.

We were still a little concerned as, because Nepal is such an isolated country and because the Royal Nepalese Airlines are as they are, there could be frequent delays before the planes eventually arrived safely at Biratnager. Finally the colonel arrived, not only before the baby but even before the baby was due.

Anna didn't know what all the fuss was about. She is as tough as nails and had prepared for her delivery by reading Grantly Dick Reed on relaxation and religiously performing her pre-natal exercises.

The colonel was only to be up in Dharan for a few days, so he induced Anna the day before her baby was due, by performing an artificial rupture of the membranes. This was indeed necessary as Anna had had threatened miscarriages when she was both two and three months pregnant and had had to stay in bed for a fortnight on each occasion to save the baby. Because of these threatened abortions, it was dangerous to allow her to go beyond term.

*'In sorrow, thou shalt bring forth children'*

That evening Anna went into labour and the colonel and I went over to assist her with the final stages of the delivery.

A frightening thing happened, the baby's heart rate suddenly and inexplicably crashed from 140 to 90. Our unborn baby's condition was critical—Rachel had only minutes, if not seconds, to live.

'Quick!' cried the colonel. 'The Ventouse!' He had to get the baby out very quickly, if Rachel was to survive at all.

Well, we found the never-before-used machine, put it hurriedly together, to discover, to our consternation, that it didn't work. The obstetrician couldn't maintain the suction pressure.

Meanwhile, Jim, the anaesthetist, had also arrived, and we doctors were all clustered around the wretched machine, not taking a blind bit of notice of poor Anna.

'Damn the Ventouse!' thought Anna. 'I'll show them!', and filling her lungs as only she can do, she pushed until she nearly burst.

Out came Rachel, face to heaven, naughty little girl, none the worse for the past few minutes. Normally the baby's face should be delivered pointing the other way; that is, to the ground. These 'face to pubis' presentations, or persistent occipito-posterior, meaning the back of the head facing the mother's back, are a common cause for delayed delivery, but not so with Anna.

Still, I learned all about the Ventouse. All that had been necessary to make it work that night was to push in the rubber stopper a little harder into the vacuum bottle.

I performed the first ever vacuum extraction at the B.M.H. Dharan the following day, and since Rachel's birth, the Ventouse extractor has saved the lives of many babies.

Among the commonest emergencies that occurred at the B.M.H. were retained placentae. This meant that the afterbirth was left behind inside the mother following the delivery of the baby. This results in two very severe complications, bleeding and infection.

Normally, following the birth of both baby and placenta ('after-birth') the womb contracts down firmly and the bleeding stops. With a retained placenta, the womb is unable to contract fully.



## *Mainly for Women*

Nearly always the placenta has partially separated from the wall of the womb, resulting in a raw bleeding surface inside the womb which may continue pouring blood, sometimes until the poor woman is exsanguinated. Sometimes the placenta has fully separated and been half expelled, protruding through the neck of the womb (the cervix); the presence of the placenta in the cervical canal appears to be a fairly shocking condition. Now the partially separated placenta receives very little blood supply from the womb and therefore the placental tissue dies, a condition called necrosis, and this is then ripe for infection. Soon the whole womb may become infected and this infection may pass along the tubes to cause peritonitis with possible subsequent sterility, if not actual death. Another dreaded complication is lockjaw (tetanus), which we saw on more than one occasion as a complication of a retained placenta. Finally fatal gas gangrene may develop.

In England, a retained placenta is also a fairly common complication of an otherwise normal pregnancy. The treatment is simple; the patient is anaesthetised and the obstetrician puts his hand into the vagina through the neck of the womb and peels the placenta gently off the wall of the womb; all is over in a few minutes. Even if the baby has been born at home, the placenta would be removed within a very few hours.

Things are not that simple in Nepal.

Devimaya lived up in the hills some two days' journey from the B.M.H., about an hour's journey from a little government hospital at Dhankuta. Five days before I saw her, the womenfolk of her village had attended her during the delivery of her first baby, a little girl, but the afterbirth had failed to come away.

She was carried to the little government hospital having suffered a very severe haemorrhage. At the government hospital they had tried unsuccessfully to remove the placenta; she was carried to the B.M.H. where, on arrival, she was in a truly desperate condition.

Her haemoglobin was now a mere 30 per cent. The umbilical cord was still visible, hanging out of her vagina; she had a stinking vaginal discharge. On top of all this, she had double pneumonia. Seven of her relatives and neighbours had come down with her;

*'In sorrow, thou shalt bring forth children'*

we blood grouped all seven and found two that had group 'O' blood, the same as hers. We gave her one of these pints of blood and huge doses of penicillin and streptomycin to try to combat the terrible infection of her lungs and womb. We also gave her an injection of anti-tetanus serum to reduce the chances of her developing tetanus.

We watched her carefully for four hours while the fresh blood dripped into her circulation; her general condition improved somewhat and my anaesthetist finally agreed that she was just fit enough for the anaesthetic. But as he tried to anaesthetise her, he found that many of the anaesthetic agents would hardly work; her lungs were so full of infected sputum that the gases could simply not cross over into her blood.

Finally, she was asleep and I noticed that she had a nasty tear, due to the unskilled attention at her delivery; it was in fact performed by her mother. She had also got a torn cervix which could have been due to the attempted removal of the placenta at Dhankuta Hospital. Her bladder was full of urine, her rectum was full of faeces; before I could even examine her I had to pass a catheter to empty her bladder and then remove the faeces with my fingers.

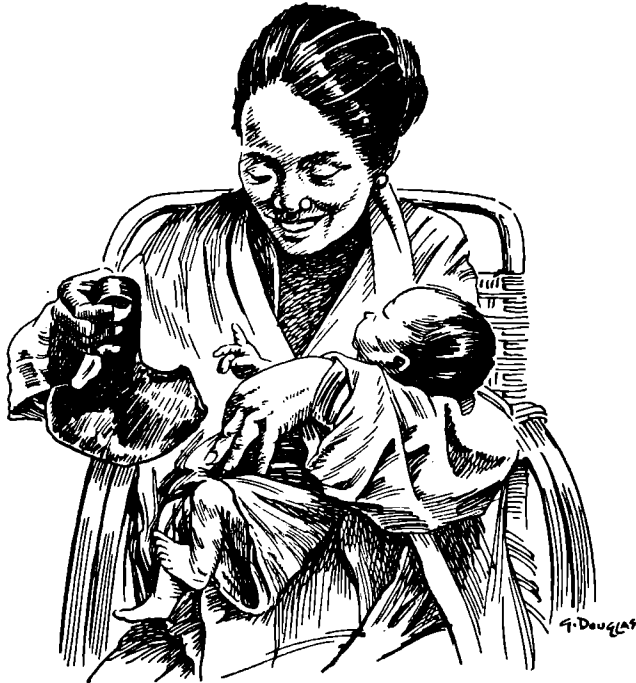
Because of the trouble my anaesthetist had in making her relax, I had great difficulty in removing this afterbirth. I could only get two fingers through the cervical canal, so with a pair of forceps, normally designed to remove a foetus after an early abortion, I removed the pieces of placenta piece by piece. Every time I removed a portion she bled, blood I knew she could ill afford to lose. It was a slow, tedious and worrying procedure, especially in one so ill, but finally I had removed all the afterbirth and we then gave her an injection of intravenous ergometrine which caused the womb to contract down firmly, and now at least there was no more bleeding.

She remained desperately ill after the operation and, during the second pint of blood, her temperature rose to 105 °F and her bed started shaking as she convulsed with a rigor. It is always dangerous to give blood to a patient who has a high fever and this complication of a rigor is a well-known phenomenon. It is

## *Mainly for Women*

an allergic manifestation, so I gave her an anti-allergic drug called phenergan. Because of the overwhelming infection, I also gave her a drug called hydrocortisone; the adrenal glands, which normally produce this substance, are sometimes depressed at such a time.

The drugs worked like a dream. Her fever settled, and soon she was tucking into great mounds of rice. Her colour improved every



day and when the last vestige of her pneumonia had gone, she went home none the worse for the terrible experiences.

All sorts of things are tied on to the cord in the hope that the placenta will come away or at least that the cord will not disappear back inside. I have seen axe-heads, sickles, small kukris, pieces of wood, sticks and even hoe-ends tied to the cord!

Meanwhile, the mothers have tried every possible method that they can think of to rid themselves of the unwanted afterbirth. They even try swinging with their arms from the rafters of their roof, though most women are far too exhausted for such a manoeuvre. The most common method used is for the hair, which is normally in the form of a long plait, to be put in the mouth and swallowed. This causes such intense retching and

*'In sorrow, thou shalt bring forth children'*

vomiting that the abdominal muscles contract so violently that the afterbirth may be pushed out in this procedure. This method is also used by Chinese women. Should this fail, then her hair is unplaited and combed. Meanwhile, if the attendants can find any half-finished knitting in the house, which has been done by the poor woman, this is all unpicked in the hope that loosening everything, both hair and wool, will also loosen the afterbirth. If this method fails, things are looking desperate; but the Nepalese still have their beliefs. The coins of King Mahendra's grandfather are kept for such an emergency. These bronze and silver coins are washed with water and the cold water is drunk by the poor suffering woman.

I cannot think how this can work unless the dirt from the coins causes the woman to have dysentery and the strain of the dysentery is enough to dislodge the placenta. If King Mahendra's grandfather's coins are not available then any pure silver coin will do.

One final method of expressing a retained placenta is to wash the husband's two big toes with water and then give this water to the poor unfortunate woman to drink. They are obviously getting desperate by now!

The telephone rang at half-past six in the morning. 'Wrong number I hope,' I said to Anna as I got out of bed and crossed the bedroom to pick up the phone that was stupidly placed as far away from the bed as possible.

I think we must have had one of the world's worst telephone systems in the cantonment. It was too heavily loaded and almost fifty per cent of the phone calls went to wrong numbers. Whenever I dialled any number from my home I invariably got the brigadier's home.

However, that morning, unfortunately, it was not the wrong number. The duty doctor was ringing. 'I have a patient here with a retained afterbirth,' he explained. 'The baby was born an hour ago and so far there is no sign that the afterbirth is going to arrive.' The poor midwife, in her enthusiastic attempts to hurry up the passage of the afterbirth, had pulled the cord right off.

Now the Nepalese believe that if the cord comes off or if the cord disappears inside the womb, then the mother will die.

## *Mainly for Women*

Fortunately, this woman never knew what had happened. For in truth it is not a calamity, only a nuisance.

I didn't mind; in life I find it very much easier to correct other people's mistakes than my own. When I arrived at the labour ward, my anaesthetist said: 'Did you know that she had a train ticket in her binder, from Biratnager to Calcutta, dated six months ago, in August 1967?' The patient had requested that, if she had a retained placenta, this was to be tied around her abdomen.

I later learned that this is a fairly common belief and many of the patients arrive with these tickets hidden in their binders.

'Why do they believe this?' I asked.

'A train is very fast,' replied the midwife, 'and they believe that with this ticket the afterbirth will also come away very quickly.'

'Then why on earth didn't you tie the ticket round her tummy, instead of pulling on the cord?' I teased the poor girl. Poor thing, she didn't know which way to look, she had no idea if I was being serious or not.

'Well, get the ticket,' I said, 'and tie it round her tummy.' This the staff nurse did.

Meanwhile, my anaesthetist, who had already set up a transfusion in case haemorrhage should occur, slid the needle of a syringe containing pentothal into a vein and Lalmaya, confident that the ticket would work, fell asleep, without even knowing what we were doing.

Ten minutes later the afterbirth was safely out. Lalmaya was sleeping peacefully with her little baby safely by her side.

Before the actual delivery of the placenta, the umbilical cord is painted with a saffron dye which the Nepalese call *hardi*, and also painted with mustard oil. It is tied twice with thread that has been soaked in the yellow fluid. The cord is now divided by the oldest woman in the household with the little knife that goes with the kukri, the karda. It is cut over a rupee piece.

Once a woman came up to my clinic wearing the most gigantic kukri on her back that I have ever seen. She had worn this from the moment her baby was born, and this protected her baby from all the evil influences and witches.

Once the placenta has been delivered, it is put in a box or a tin

*'In sorrow, thou shalt bring forth children'*

and buried so that it is not eaten by dogs or jackals; for, if this should happen, the child will fall sick. Ideally, the placenta should be buried near or under the kitchen floor, the belief being that, wherever the child will visit, he will always find rice and never go hungry.

No man is allowed at the confinement, as the Nepalese women are very shy. However, they did not carry this shyness to the labour ward at the B.M.H. I don't think that they counted me, a foreigner, as a proper man even—not very flattering as I recollect!

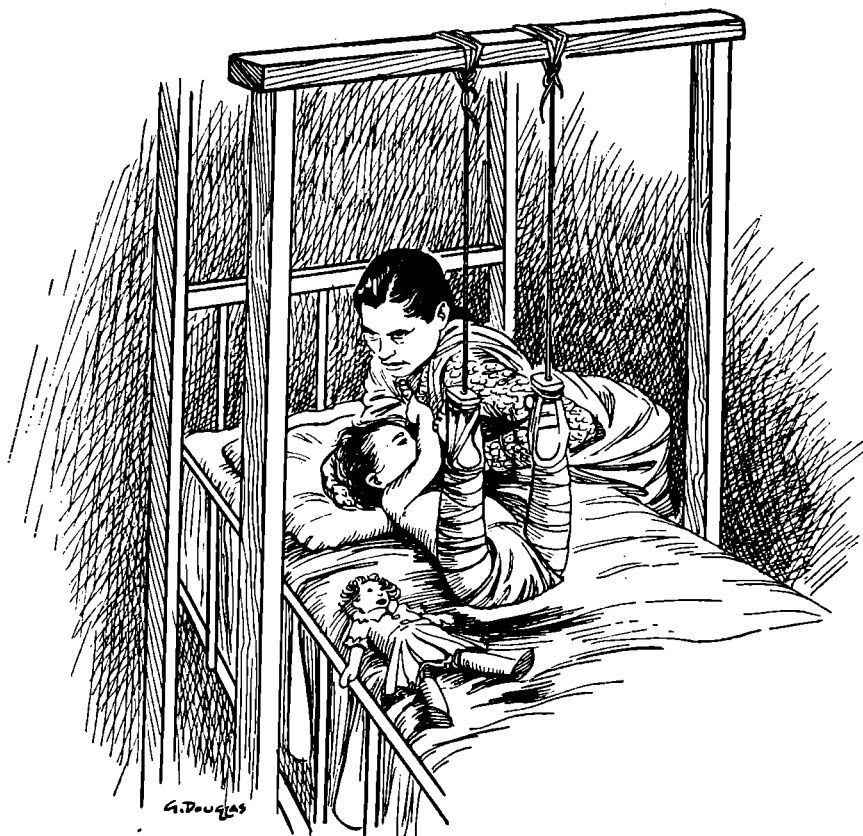
After the birth of the baby, the mother is considered unclean; this period extends for up to twenty-two days. It is a Hindu belief. During this time, the woman should not cook unless forced to by some circumstances or other, when only she is allowed to eat the food. She is not allowed to wear *sindur* (the *tica* or red mark on her forehead and the red marking down her hair parting) nor is she allowed to wear any jewellery for this period.

The priest, or Brahmin, calls at the house where he prays for the baby and, finally, after consulting the elements, which include the stars, the moon, the date and time of birth, he names the baby. The parents have no say in this naming at all, although the mother can choose a nickname for her baby, which she is perfectly free to use all the time.

Breast feeding is absolutely essential for the welfare of the Nepalese babies and should it become impossible as, for example, when there is a breast abscess, cracked or inverted nipples, then, as often as not, the cessation of natural feeding is a death warrant for the baby. Some of these unfortunate mothers try to give their babies buffalo milk instead. However, this is not cheap. The wives of the Gurkha soldiers and those of the lucky civilians employed in the cantonment, as well as some of the wealthier families from tribes like the Bahuns and Chettris, may be able to afford artificial milk like Lactogen, which is imported from India, but the vast majority of Nepalese women cannot afford these milks and their babies either starve or die from diarrhoea and vomiting due to unhygienic artificial feeding. Even those fed on buffalo milk usually die as the milk has been adulterated by the unscrupulous milkman with any local source of water.

## *Mainly for Women*

One morning, at my post-natal clinic, a mother complained that her breasts were very distended. Hemlata told me how this mother was also feeding one of the other mother's babies as well as her own, as she had so much milk. I told her how very sensible I thought she was. However, she still asked me for pills to cut down her milk production. Though this can easily be done with



a hormone called stilboestrol, I refused, in case the pills worked too well and completely dried up the milk.

It is extraordinary how breast feeding can be resumed. One of my patients had been so desperately ill with lockjaw that I had had to perform an emergency tracheostomy, so that she could breathe through her neck during the terrible spasms that she suffered. Without the tracheostomy, she would have asphyxiated. So ill had she been, that I told her husband that she could not possibly recover—yet, by a miracle, she did. She had had a baby ten days before coming into hospital. The tetanus germs had entered in through a small tear she had sustained during the

*'In sorrow, thou shalt bring forth children'*

delivery. She had been in hospital for five weeks, most of the time at death's door. All this time she had been far too ill even to think of breast feeding. Her milk had, naturally, completely dried up. Meanwhile, I had been seeing her little baby at my weekly post-natal clinic. But each week the child had lost more weight and was looking sicker and sicker. The child was being fed on buffalo milk. A mere week after my tetanus patient had been sent home from hospital, she attended the clinic with her baby. I was most relieved to see that the baby had for the first time actually managed to gain something—true it was only an ounce, but it was a start in the right direction. I put this down to maternal love and a more contented baby. I explained to her how important it was that she should boil the buffalo milk and also the container with which she fed the baby, whether it was a cup or a proper feeding-bottle. She nodded. She said she understood.

By the following week the baby had gained eight ounces. While I was congratulating the mother, the baby started getting restless. So the mother lifted up her blouse and pushed a nipple into the baby's mouth. I imagined this gesture was in lieu of a dummy—though of course much warmer and more intimate. Instinctively I reached out to the opposite bosom and gently squeezed it, and out came a stream of milk. She had fed her baby from the moment I discharged her from the hospital. The baby's suckling had stimulated the breast into full milk production within a few days. I hadn't believed it was possible.

Frequently the mother persists until the child gets fed up with the breast. This usually occurs when they are about five years old. I once met a mother who suckled her twelve-year-old child. Once, the mother and grandmother of the same baby arrived together at the clinic. Both were feeding this fortunate baby. The grandmother had a five-year-old child as well. She said she was helping out as her daughter was lazy. Poor daughter! She already had several children and this last one had come so quickly, that she had had no time to call the ambulance. She had suffered from such a severe post-partum haemorrhage that she was lucky even to be alive.

Some mothers tie pieces of string loosely around the waists,



## *Mainly for Women*

wrists and ankles of their babies. They do this because there are no scales in their home. By this method they are readily able to see whether the child is gaining weight. As the child grows, the strings become tight. Then they are reapplied loosely until filled again. If the child is getting too fat, the mother will notice that the strings have become too tight too quickly, and any loss of flesh is soon apparent.

## Faith—and Finale

Fifty-year-old pensioner Singubir was one of the craftiest patients who ever managed to find his way into the B.M.H. He was a real 'old soldier'. He had come to Dharan as an 'escort' for his wife who was truly desperately ill with a huge mass in her abdomen. She had needed infusions at the medical reception station at Paklihawa in Western Nepal to even keep her alive and somehow had survived the exhausting two-day train journey across Northern India. Before his wife had even been seen by the admitting officer, Singubir had procured himself a stretcher and pretended to be even sicker than his wife by groaning and rolling around. He complained of pains in both his legs, where he had old gunshot wounds.

We did the kind thing and admitted him to the luxury of the B.M.H. An X-ray of his femur did in fact reveal a lot of metal, from an exploded bullet; he must have lived in this 'agony' for seventeen years. As I examined him, he kept putting my fingers on little lumps in various parts of his body. True, each lump was genuine, but I felt they had been kept in store for the rainy day which had now come, especially as we were in the very middle of the monsoon. He guided my fingers to pieces of metal which he could feel under his skin, to little soft tissue swellings which are called lipomata and to a little rupture he had above his navel.

During the Malayan confrontation he had been in a platoon of the VI Gurkhas searching for bandits. It was just dawn when they stumbled into an ambush and Corporal Singubir was shot through the right thigh. He was lucky, nothing vital was hit. Two of his colleagues were also shot, one through the wrist and the other through the arm, but no one was killed. The Gurkhas charged with fixed bayonets while others waved the traditional war weapon, the kukri; although the bandits could

## *Mainly for Women*

only have been thirty yards away, they had vanished in the thick jungle.

The surgeon, who had dealt with Singubir, had made an excellent job of the gunshot wounds; they had been beautifully grafted. However, it is impossible to find all the pieces of bullet and, during the years, pieces of metal had gradually worked themselves to the surface. Truthfully, they had caused him little if any discomfort but they provided him with a handsome disability pension.

Now we placed him in a nasty predicament: did he want me to remove the bullets or did he wish to keep his pension? During the following night, a most remarkable cure to all his ailments occurred, and next day he left the B.M.H. to stay in the pensioners' lines in the cantonment. He had, however, had several days at the B.M.H. which had suited his purpose and his pocket admirably.

Satadevi, his thirty-eight-year-old wife, looked so ill that it did not seem possible for her to survive more than a few days. She was too weak even to sit up on her own. For nine years she had suffered bouts of abdominal pain culminating in a huge mass that had been present for the past three months. Finally things had become so serious that they had had to make the ten-day journey from their little village to the M.R.S. at Paklihawa, where Singubir was conveniently collecting his pension at the same time! The doctor there was extremely worried about Satadevi's condition and had sent us an urgent signal requesting her immediate transfer.

When she arrived I saw just why he had been so worried; she was literally skin and bones, with a huge mass in her abdomen which I did not have to palpate, I could see. It extended right across her abdomen. I prescribed antibiotics and set up a fresh transfusion, planning the operation for four days later. However, when that time arrived she was still too weak. I was in a predicament. She would never really get better until she had had her operation, but she was too weak to undergo this major operation. I had found two pints of blood for her. Her husband, regrettably, had been far too 'ill' to contribute any himself. I decided to gamble. I gave Satadevi the two pints of blood and continued to

## *Faith—and Finale*

feed her transfusion fluids for the next two days to make her as strong as possible. At last there was a mild improvement, so I decided to operate, without any more blood being available at all.

I opened up the abdomen and there to my utter amazement was something I had never expected. There was no inoperable cancer, no hydatid cyst due to worms, no tuberculosis, simply a simple mechanical obstruction. I shouldn't really use the word 'simple' for a condition which had been present for at least three months. What had happened was that a small intestine had disappeared inside the large intestine, rather like a fountain-pen which is pushed into its cap. The medical diagnosis was a chronic intussusception. A chronically inflamed appendix had been the original cause of all the trouble. Once it had got inside the large bowel, the small intestine would not come out again and this had resulted in a state of chronic intestinal obstruction for all this time. I simply had to try to remove the whole of the obstruction, some four feet of swollen gut. During the months this mass, which had the same shape as a gigantic German sausage, had stuck to all the surrounding tissues. I had to try to conserve every drop of blood as I carefully separated the diseased intestines. Finally the mass was freed. I then removed it and sutured the two open ends of gut together. Her worries were over. She had weathered a big operation termed a right hemicolectomy, without being given any further blood. She made an excellent recovery.

The day before she was due to return to Western Nepal, I asked her why she had waited so long before coming. It turned out that she had been terrified of the journey until one night she had had a dream. It had been intensely real. In it the sun was shining brightly on white faces and they were all doing good work. From that night she had known that she would be all right and had immediately resolved to come to the B.M.H. She also told me that in the dream she had seen me, and she had recognised me immediately on her arrival at the B.M.H. She had never had the slightest doubt that she would recover from the operation and that all would go smoothly.

I was very shaken by her words but I believed her. I feel that the minds of the Nepalese hill people, with their deep beliefs

## *Mainly for Women*

in witch doctors and fate, are much nearer the astral planes than those of most British people can ever be.

I asked her if there was anything further I could do for her. 'Only make the travel arrangements go smoothly,' she said, for she still had some travel phobia. I wondered what disaster might befall her on some journey one day. I arranged the most comfortable Land-Rover I could find to take her to the railway station.

So she left the B.M.H., much fatter than when she had arrived, to return safely to her sixteen-year-old daughter Gaynu, who had always been her confidante and who had originally persuaded Satadevi to make the long journey across India for her operation.

Gaynu means 'intelligent'.

The accidental burning up of the forest, in the tinder-dry conditions of April, was to result in yet another tragedy, possibly the saddest of all the cases that had come to Dharan, during my two years there. It also produced the last major operation I performed in Nepal.

Umamaya, a pretty little ten-year-old girl, was minding her father's two oxen in the forest. She was very fond of her two charges, which she called Pualea and Chaturea; the latter, ironically enough, means 'clever', for as it turned out, her oxen had been much cleverer than she. Poor little Umamaya had been standing too close to a forest tree, whose roots had been smouldering for many hours. It took only a sudden gust of wind to send the virtually rootless tree toppling. Umamaya stood rooted to the spot, as she watched the great tree crashing over her. At last, when she had finally gathered her wits, a wave of giddiness spun over her. She slipped. A split second later the tree had engulfed her. That she wasn't killed was a miracle. The trunk smashed her left arm while the smaller branches tore at the rest of her body.

Her father, who had been only a few yards away, raced to the stricken tree and dragged Umamaya from under it. To his utter horror, he saw that she had lost both her wrist and her hand in the accident. He ripped off his shirt and wrapped her raw and bleeding stump in the cloth. She had lost, according to her father, some two or three pounds of blood. He then went back and

## *Faith—and Finale*

searched under the tree for the macabre item. He found it and wrapped it in another piece of his dirty shirt.

All this had happened the previous afternoon. Little Umamaya arrived at the B.M.H. at half-past eight in the morning; with her came a pathetic little bundle—her hand! Though weak from loss of blood, she refused even to lie down. I did not see her when she first came in, as I was ill myself with a fever and the worst headache I have ever had in my life. I took an extra large dose of aspirin and walked slowly over to the ward. Every step seemed to exacerbate the pain. There was Umamaya, sitting up in bed, her little eyes dilated with apprehension. Her dirty faded clothes were no more than rags. They were bespattered with stale blood. A clean green towel, which contrasted strangely with the filth, covered her arm. I opened it and saw her mutilated forearm. I picked up her other hand; it was icy cold. I felt her pulse. It was so feeble that I even had difficulty in counting it. Her blood pressure was so low, from the loss of blood, that not a single drop of blood came out of the mutilated arm. Her wretched condition did little to improve my own symptoms. I asked the anaesthetist to set up a transfusion for me. Her veins were so collapsed that he had to operate even to find a vein.

Meanwhile, the father pathetically asked me to suture back the hand.

I shook my head. 'I cannot,' I told him, 'for if I do she may die' (as gangrene would set in). 'It is better to be alive without a hand,' I added.

From the look on his face, I had the impression that perhaps I had got my priorities wrong. . . . Life is cheap in Nepal. . . . A maimed person is a liability . . . but life was never cheap to me.

Even so, death did occasionally come as both a tragedy and a relief from tremendous tension, after an extraordinary battle against fantastic odds. I had spent hours and hours, day and night, days on end, trying desperately to keep patients alive with such terrible diseases as tetanus, and at the end been so physically and mentally exhausted, that the patient's death had come as a frank relief. This is what life was like, when there was just no one else to help . . . I was the only surgeon for hundreds of miles around.

## *Mainly for Women*

There is nothing, technically, very difficult about suturing back a hand, so long as the arteries are carefully united. The nerves, tendons and bones can all be repaired fairly easily, but it must be a clean wound, as when a hand is sliced off by a saw, and, what is still more important, the accident must only just have occurred, certainly within very few hours. Even under these exceptional circumstances, the function of the hand remains poor, and the time that healing takes is so long. It is doubtful, in fact, if it is ever worth even attempting.

Umamaya's injuries were old and dirty—so dirty that unless I removed even more of her arm, she could have easily developed gangrene.

I took her to the theatre and performed a further amputation, higher up the arm. She never moaned, she never wept once in the post-operative period. She was a wonderfully brave little girl. If only she had stayed closer to her ox, Clever, the tragedy would never have occurred.

Hemlata wrote to tell me that a month later Umamaya was back in the forest with her oxen, but with only a stump for her hand, and the memory of the B.M.H.

Anna, James, Rachel and I were back in England by then, but with eternal memories of the wonderful villagers of Nepal.

## Epilogue

And so our two years in Nepal were over. We had met the poor peasants of that once forbidden land . . . we had learnt a little about their hard-working lives . . . we had learnt a great deal about their sufferings. We had done something to alleviate their medical problems . . . although, in truth, these efforts were a mere drop of comfort in an ocean of disease. We had seen the mighty Himalayas and been duly impressed. We had worked with the Gurkha soldiers and found them no different from any other patients anywhere in the world. I had had a job in the Army for two years when I had not wasted a working minute.



# Glossary

- A.A.F.B. Acid and Alcohol Fast Bacillus, Tuberculosis.
- Afterbirth, placenta A vascular organ that connects the unborn baby to the womb and thereby supplies its nutrition.
- Amyloidosis A generalised wasting disease consequent on chronic osteomyelitis.
- Anastomosis An artificial join of two hollow structures.
- Ante-natal Before delivery.
- Antepar Drug used in the treatment of round and thread worms.
- Antepartum Before birth.
- Antibiotics Group of drugs which kill specific micro-organisms.
- Antibodies Protective bodies in the blood of immune people.
- Anticonvulsants Drugs used to prevent fitting.
- Antihelminths Drugs used to kill worms.
- Antiseptics Agents that kill bacteria.
- Arthritis, Septic. Bacterial infection of a joint.
- Ascites Free fluid in the abdominal cavity.
- A.T.S. Anti-tetanus serum.
- Avascular Without a blood supply.
- 
- Bahadur Brave man, warrior, commonest male Christian name.
- Bahun Hindu tribe of Indian descent.
- Bakra* Goat.
- Bhag* Member of the large cat family.
- Bhalu* A bear.
- Bidi* Cigarette.
- Bazaar Township, collection of shops.
- B.M.H. British Military Hospital.
- Bone marrow Substance contained in the medullary cavity of bones, may be red or yellow. The red blood cells are produced by the red marrow.

## Glossary

- Brahmin Priest.
- Braun Frame A support for a broken femur or tibia.
- Breech Unborn baby presenting bottom first.
- Bronchus Main airway to a lung.
- Burn contracture Scarring up after a burn resulting in a deformity.
- Buti* A magic charm.
- 
- Cannula A tube for introduction into the body (usually into a vein).
- Cantonment The whole British camp at Dharan.
- Cardiac asthma Attacks of breathlessness and blueness associated with a rapid pulse, occurring in failure of the left side of the heart.
- Casilan Calcium caseinate which is in the form of a fine powder which is 90 per cent protein.
- Cervix Neck of the uterus.
- Chemotherapy Implies antibiotic treatment, e.g. with penicillin.
- Chettri Hindu tribe of Indian descent.
- Chloramphenicol Antibiotic used mostly for typhoid fever.
- Cholecystectomy Removal of the gall-bladder.
- Cholera Bacterial disease causing profound diarrhoea and vomiting.
- Cirrhosis A disease of the liver resulting in severe scarring of the organ.
- Colles fracture Broken wrist.
- Convulsion An involuntary spasm or contraction of muscle.
- Coronary thrombosis Blood clot in an artery in the heart.
- Cross match An examination that determines the safety of a blood transfusion.
- C.S.S.D. Central Sterile Supply Department.
- Curette A sharp edged spoon-shaped instrument used to scrape out diseased matter.

*Dahl* Lentils.

## Glossary

- D & C      Dilation and curettage, method used to evacuate the uterus (womb).
- Dashera      Head-cutting Nepalese festival.
- D.D.T.      Dichloro-diphenyl-trichloro-ethane, an insecticide.
- Dextran      An emergency substitute for blood.
- Dextrose      Sugar solution, safe to give as a transfusion.
- Dewali      Festival of Lights.
- Doli*      Hammock.
- Drip      Another term for a transfusion.
- Duca*      Pain.
- Duodenum      The first twelve inches of small intestine.
- 
- Eclampsia      A very serious complication of pregnancy when fitting occurs. Pre-eclampsia is an earlier stage of eclampsia before the actual fitting presents.
- Empyema      Pus between the lung and chest wall.
- Endemic disease      One to which the inhabitants of a particular district are peculiarly subject, affecting great numbers.
- Eneuresis      Bed wetting.
- Epidemic      Affecting great numbers.
- Episiotomy      A cut made to enlarge the vagina to facilitate delivery of the baby.
- Ergometrine      A drug whose specific action is to cause the womb to contract.
- Esmarch tourniquet      A rubber bandage used to make a limb bloodless before surgery.
- Exsanguination      To make bloodless.
- External cardiac massage      Production of a heart beat by intermittent pressure on the chest wall.
- 
- Fallopian tube      Tube that takes the ovum from the ovary to the uterus.
- Femur      Thigh bone.
- Fibula      Smaller of the two leg bones, the other being the tibia.
- Flavine      Yellow antiseptic agent.
- Foetal distress      The condition of the unborn baby is getting serious.

## Glossary

- Fracture, compound      A fracture that has broken the skin.
- Fracture, simple      A broken bone without breach of the skin surface.
- Fracture, pathological      A broken bone resulting from disease and minimal trauma.
- Full dilation      When the neck of the womb has opened fully for the passage of the baby.
- Fulminating      Sudden in onset and rapid in course.
- 
- Gangrene      Death of tissue.
- Gangrene, wet      Caused by decomposition due to bacteria so that the limb is swollen, blistered and discoloured. The patient is desperately ill with a high fever and delirium.
- Gangrene, dry      Implies the result of stoppage of the arterial supply—for example by injury to the artery, so that the limb is painful, pale and later becomes black.
- Gangrene, gas      Is wet gangrene due to a bacteria called *Clostridium welchii* which produces gas in the tissues.
- Gastro-      A prefix relating to the stomach.
- Ghirling      Method of river crossing by means of a basket pulley.
- G.O.R. ward      Gurkha Other Rank ward.
- Goitre      Swelling of the thyroid gland in the neck.
- Gurung      Tribe from which recruits are sought for the British Army.
- 
- Haematoma      Blood clot.
- Haemoglobin      Denotes the quality of the blood, the colouring matter in the red cell.
- Haemostasis      Method of stopping bleeding.
- Havildar      Old-fashioned term for Gurkha N.C.O.
- Hip spica      Plaster of Paris immobilising the hip joint.
- Hookworm      Tiny worm that inhabits the duodenum and causes profound anaemia.
- Humerus      Upper arm bone between shoulder joint and elbow joint.
- Hydatid cyst      A collection of fluid that is part of the life cycle of a worm.

## Glossary

- Hydrocortisone      Drug used for resuscitation.
- I.N.A.H.      Isoniazid. Drug used in the treatment of tuberculosis.
- Immunity      Resistance to a disease, sometimes acquired by having already had the disease, or by injections to prevent the disease.
- Intravenous      Situated within the vein.
- Intubate      The introduction of a tube into either a blood vessel or the larynx.
- Intussusception      Part of the gut becomes pushed into another part beyond it, resulting in blockage, with pain and vomiting.
- Involucrum      The new shell of bone formed in chronic osteomyelitis.
- Isotonic solution      Having the same osmotic pressure as the fluid into which it is being added—for example normal saline is isotonic with blood plasma.
- Kala Azar      A parasite disease, involving especially the liver and spleen, resulting from the bite of a sand-fly.
- Kapok      White fluffy material from the large seeds of a tree.
- Kanchi      Youngest daughter.
- Karda      Small sharp knife which, with the *chakmak*, makes up the three blades of the kukri.
- Khat      Bed.
- Khola      River.
- Kosi      Huge river fifteen miles east of the camp.
- Kuntscher nail      Long piece of metal used to fix a broken thigh bone.
- Kukri      A knife, the national weapon.
- Laparotomy      Exploratory operation to ascertain the diagnosis and carry out treatment whenever possible.
- Laryngoscope      Instrument designed for examination of the larynx, the voice box.
- Leech      An aquatic worm which sucks blood.

## Glossary

Limbu Tribe from which recruits are sought for the British Army.

Lipoma A benign fatty tumour present under the skin. The plural is lipomata.

Lumen The space inside a tube.

Macerated Breaking up, rotting.

Malaria A feverish disease with profound anaemia resulting from the bite of a certain mosquito.

Malayan Hospital Affectionate term for the B.M.H. as the Gurkha soldiers go to Malaya.

Mandible Lower jaw.

Medullary cavity The hollow in the centre of a long bone containing bone marrow.

Membrane A thin layer of tissue that covers an organ.

Meningitis Infection of the coverings of the brain.

Meniscectomy Removal of torn cartilage from inside knee.

M.R.S. Medical Reception Station, a miniature hospital.

Multigravida Pregnant with second or subsequent baby.

*Namaste* Indian and Nepalese greeting with the hands placed as if in prayer.

Obstructed Labour A block in the birth canal.

Oesophagus Gullet.

Omentum An apron of fat that lies across the intestines.

Orthopaedic Surgery of bones and joints.

Osteomyelitis Invasion of bone and marrow by disease producing micro-organisms.

Oxytetracycline An antibiotic often used for cases in which penicillin has failed.

Palpation Examination by pressure with the hand.

*Panchayat* A village council.

*Pani* Water.

P.A.S. Para-sulphonic acid. Drug used in the treatment of tuberculosis.

## Glossary

- Patuka* Binder, abdominal.
- Pedicle graft Full thickness of skin and underlying fat transplanted from one part of the body to remedy a defect of a similar structure. It is, at first, attached by its stem to its original site to maintain an adequate blood supply.
- Periosteum A layer of tissue that covers all bones.
- Peritoneum Membrane that lines the abdominal walls and the contained organs.
- Peritonitis Inflammation of the peritoneum.
- Pethidine Pain-killing drug to which addiction can develop.
- Pharynx A muscular passage behind the mouth leading to the back of the nose and the gullet.
- Phenergan A drug used to alleviate allergic reactions.
- Phenobarbitone Sedative, frequently used to prevent epileptic or other convulsions.
- Physohex Antiseptic substance used to sterilise wounds and hands.
- Pice One tenth of a rupee.
- Placenta The afterbirth.
- Placenta, retained The afterbirth that has not delivered.
- Plasma Blood from which the red cells have been removed.
- Postnatal After delivery.
- Postpartum After birth.
- Premedication Drugs given before an operation to allay anxiety and minimise complications.
- Primigravida Carrying first baby in the womb.
- Prognosis A prediction as to the probable result of an attack of a disease.
- Prophylactic Tending to ward off a disease.
- Proximal Opposite to distal. Implies that part of the limb nearest to the main body.
- Pun Tribe from Western Nepal from which recruits are sought for the British Army.

Q.A.R.A.N.C. Queen Alexandra's Royal Army Nursing Corps.

## *Glossary*

- R.A.M.C. Royal Army Medical Corps.
- Rabies A lethal virus disease contracted from mad dogs.
- Rai Tribe from which recruits are sought for the British Army.
- Rakshi* A rum.
- Reception Where out-patients and emergencies are seen.
- Recovery ward The part of the hospital designed to look after the patients immediately after their operations.
- Rejection A process by which the body throws off any foreign material in it.
- Respiratory drugs Drugs used to facilitate breathing.
- Resuscitation Treatment of shocked patients.
- Rigor Violent shivering.
- Roundworm Worm like an earthworm that lives in the intestines.
- Rupee Coin, value approximately one shilling.
- Ryle's tube A thin tube that can be passed through the nose or mouth into the stomach.
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- Sacrum A triangular shaped piece of bone which forms the back of the pelvis.
- Saline, normal Salty solution safe to administer as a trans-fusion.
- Sari Form of dress worn by the women.
- Scaphoid Small wrist bone in the hollow at the base of the thumb.
- Septicaemia Pus in the blood.
- Sequestrum Piece of dead bone.
- Shaft of a bone The long straight part of a bone.
- Shresta Nepalese tribe.
- Shri Title of respect.
- Sindur A dye used for haemostasis; can be yellow or red. When red can be used as lipstick.
- Sinus An unhealed passage leading from an abscess or internal lesion to the surface.
- Smallpox Severe virus disease characterised by a pustular rash.



## Glossary

- Sphygmomanometer An instrument used to measure the blood pressure by blowing up a cuff.
- Sodium Amytal Sleeping pill and a sedative.
- Sparine Sedative that also reduces vomiting.
- Spleen A vascular organ situated in the left upper abdomen.
- Steimann pin Small metal rod that is inserted through the tibia or the heel bone to help in traction for a broken femur or tibia.
- Stethoscope Instrument used by doctors to listen to the heart.
- Stilboestrol A female hormone used to suppress lactation.
- Streptomycin An antibiotic usually used in the treatment of tuberculosis.
- Sulphonomides A group of antibacterial drugs used mostly for bladder and bowel infections.
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- Tamang Tribe from which recruits are sought for the British Army.
- Tendon A band of fibrous tissue, forming the end of a muscle and attaching it to a bone.
- Terai Extension of the plains of India.
- Tetanus A disease characterised by spasm and rigidity of the muscles of the body, caused by the contamination of a wound with *Clostridium tetani*, a bacteria found in manure and the soil.
- Tetany Spasm of muscles which may complicate over breathing.
- Tharu Aborigine tribe inhabiting the *terai*.
- Thomas's splint Temporary method of immobilising a broken thigh bone.
- Thyroid Gland lying in the neck across the trachea.
- Tibia The larger of the two bones of the lower leg between the knee and ankle.
- Tika or tikka Mark on forehead.
- Tola A weight for gold equal to 180 grams troy (5,760 grams = one ounce).
- Trachea Windpipe.

## *Glossary*

- Tracheostomy      Production of a hole in the outside of the windpipe.
- Traction      Pulling on a fracture.
- Transfusion      The introduction of blood or other fluid into the circulation, usually by a cannula into a vein.
- Trochanter      Prominent protrusion from the upper end of the femur.
- Typhoid      An acute infectious disease involving the intestines; haemorrhage and perforation may complicate the disease.
- Ureter      Tube that takes urine from the kidney to the bladder.
- Vas      Tube that takes sperm from the testicle to the prostate gland.
- Vasectomy      Male sterilisation by tying the vas usually in the top of the scrotum.
- Villagers' clinic      A twice-weekly clinic held entirely for the natives of Nepal.

## HOSPITAL STAFF

(in alphabetical order under first *written* name)

Derri, a Q.A.R.A.N.C. sister, in charge of the maternity and families' ward during my first six months in Nepal.

Esther, Nepalese out-patients' staff nurse.

Gorakh, reception clerk.

Hemlata, a Tibetan out-patients' nurse.

Jean, a Q.A.R.A.N.C. sister in charge of the G.O.R. wards.

Jim, anaesthetist in my second year.

June, Q.A.R.A.N.C. sister. She took over from Derri.

Premkedah, senior Nepalese theatre technician.

Ranjit Rai, administration officer.

Udai Sing, senior Nepalese orderly in reception.

Vincent, an anaesthetist in my first year.

Langlands, Major Alastair, a senior Gurkha officer at Dharan and Paklihawa.

## DISTANCES

of the main villages mentioned in the book

- BHOJPUR** A village four to five days' climb to the north-west of Dharan.
- BIRATNAGER** Border town 30 miles due south of Dharan, an hour's journey by Land-Rover.
- CHAINPUR** A village four to five days' climb north of Dharan.
- CHATTRAGHATI** A village on the Kosi river, one to two days' trek from Dharan.
- DAMAK** A village, in the terai, some 35 miles east of Dharan.
- DASMAGYIA** A village near Tellock.
- DHANKUTA** A village one day's climb north of Dharan.
- DHARAN** A town where the cantonment and the B.M.H. are established.
- GHOPE** A village a mile north of the cantonment.
- ITARI** A village mid-way between Dharan and Biratnager.
- KATHMANDU** Capital of Nepal. Spelt Katmandu in England. Usually reached in a forty-minute flight from **BIRATNAGER**, otherwise this is a three day Land-Rover drive via northern India.
- MANHUMULA** A village, in the terai, some 30 miles east of Dharan.
- PAKLIHAWA** Site of the M.R.S., in the terai, in the middle of the country, a two-day rail journey through northern India.
- PHUSRE** Site of the original construction camp four miles north of the cantonment and less than a mile from the foothills.
- PHOYAK** A village three days' climb north of Dharan.
- POKHARA** A town in a valley amongst the mountains in the middle of Nepal. Reached by a thirty-minute air trip from Kathmandu.
- RANGELI** A village on the Indo-Nepalese border, about 8 miles east of Biratnager.
- TAPLEJUNG** A village five to six days' climb north-east of Dharan.
- TELLOCK OR TELOK** A village near Taplejung, six days' climb north-east of Dharan.
- TERHATHUM** A village three to four days' climb north of Dharan.
- TRIBENI** A village, on the Kosi river, a day's walk east of Dharan.
- YELUNG** A village six days' climb north-east of Dharan.