

My Student Elective

Applied child nutrition in the Himalayas of Ladakh

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"No English, no Urdu, Prince Charles," explained our toothless Kashmiri driver as he swung his ancient bus round another improbably steep hairpin bend. We were racing up the 14 000 feet Zoji-La pass on the Srinagar to Leh Road (justifiably dubbed "the most spectacular road on earth"). My fear was almost sufficient for me to forget how uncomfortable Indian buses were. The cramped hard seats were, however, impossible to ignore, despite the Himalayan scenery and the disconcerting wrecks of less fortunate buses deep in ravines.

This was the fifth day of my journey; I was on the last leg, the two day bus journey between the capitals of Kashmir and Ladakh. Ladakh is a tiny kingdom on the border of Tibet populated by Tibetan Buddhist people who speak the Ladakhi dialect of Tibetan. The mountains are strikingly barren, the only vegetation being seen by streams or irrigation ditches. Much of Ladakh is forbidden to outsiders, and even the "open" regions have only been open for about eight years.

I was on my way to spend my elective period with the Leh Nutrition Project, an applied child nutrition programme working in several areas of Ladakh. The Indian Tourist Board is keen to promote Ladakh as a "Shangri-La," but infant mortality of about 19.5, the highest in India, puts such romantic claims into perspective.

A few years ago the Save the Children Fund was asked to provide relief services in the wake of floods. It agreed on the condition that its aid would be linked to a community self help approach. This proviso was based on the sound premise that the only realistic way of improving child health is by raising the standard of health and conditions throughout the community. The terrain makes any sort of community nutritional project extremely difficult to organise. Some villages are eight days' hard walking through mountains from the nearest jeep track, often over passes of more than 18 000 feet above sea level (fig 1). In addition, most villages are snowed up for six months of the year. Despite these problems the project is very well coordinated. It is entirely run by Ladakhis for Ladakhis, with the exception of the field director Sir Robert folkes, whose sincere aim is to make himself redundant.

The fundamental problem underlying the tragically high infant mortality is chronic, low grade, protein energy malnutrition. This makes measles, chest infections, and diarrhoea feared and often fatal diseases. The geography of Ladakh makes it difficult to assess the extent of this problem. In addition, as there are neither religious nor cultural reasons why Ladakhis should remember their birthdays the index of weight for age is useless by the time children are about 2 years old. In place of this index we used the less accurate and more time consuming

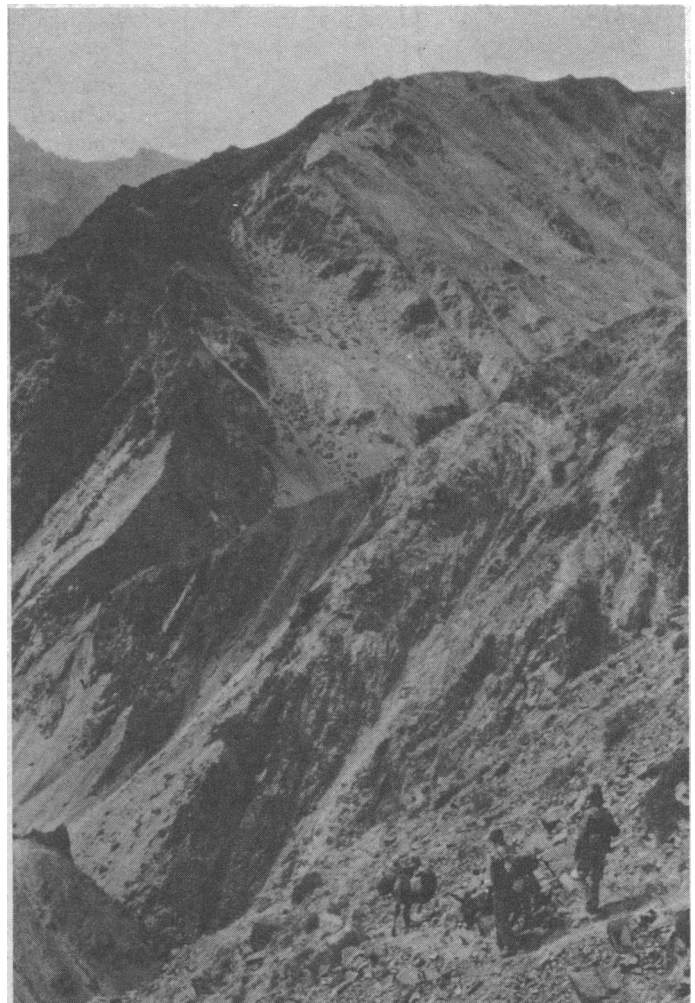


FIG 1—The medical team en route to Sumdah Chun, three days' walk from nearest jeep track.

yardsticks of weight for height and mean upper arm circumference. With these we hoped to spot children, families, and villages at risk.

The basic organ of the project is the "thukpa centre" (feeding centre, "thukpa" being Ladakhi for stew). This is an echo from the days of relief work but is a valuable way of becoming established in a village. A cook is employed for a small stipend, and he or she regularly picks up rations supplied to provide a daily meal for all the village children under the age of about 7 years (fig 2). Feeding mothers and selected older children are included too. Once this system has been established, the cook is shown how to measure mean upper arm circumference. This is re-

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FIG 2—The thukpa centre at Chilling, a remote village, five days on foot from nearest jeep track.

corded monthly in an attendance register and enables the progress or deterioration of an individual at risk to be monitored.

Most of the project's efforts were directed into "applied nutrition." Villages were given essential materials to improve their water supplies, school buildings, bridges, etc (I would have preferred a detour of several days rather than use some of the terrifying cable and trolley river crossings). Contributions were made towards "community yak schemes." With this help a village could collectively buy a stud yak to sire "dzos" (half yak, half cow), which produce valuable dairy produce, a useful source of protein, and are also used for ploughing and transport.

A good example of the project's approach is the village of Mangu. Here, the children were considerably less healthy than in similar villages nearby. It was only in this village that I saw a frankly marasmic child. The main problem was the village's tortuous irrigation channel, which had always been in bad repair. During the barley planting season the whole village had to work 24 hours a day to maintain the flow. Mothers described how they were simply too tired to breast feed their children. If the work was not done there would not be a large enough harvest to last through the winter. The project supplied cement and crate wire, the villagers supplied labour and expertise. They repaired and improved their irrigation ditch, and now the planting season is much easier for everyone, especially breast fed infants.

My time was spent travelling with the medical team of the Leh Nutrition Project. This is a recent addition to the nutrition programme and is ably organised by Dr Muhammed Yahya and nurse Tashi Cho (who was unfortunately absent during my stay). It was also helped by several health workers in various stages of training. We would make treks to groups of villages, sometimes travelling for 15 days on foot. The cooks would be asked about attendance at the feeding centre and about any problems with individual children. Then a brief clinic would be held, often outside (fig 3). The most common problems I saw were impetigo, chest infections, otitis media, conjunctivitis, and diarrhoea; often two or more of these problems would be found in one child. It came as no surprise to find that the mean upper arm circumferences of these children had fallen over the previous month. The children with these also tended to be chronically poor attenders at the feeding centre. It struck me as a familiar problem, this worldwide inability to encourage those "target groups" who are most in need of a service to use it.

Apart from the cooks, there were other contacts in the villages. Firstly, the local practitioner of Tibetan medicine, the "amchi." I am rather ashamed to admit that I had expected these local folk doctors to be dangerous, charlatans, sullen, and resentful of Western medicine. It did not take me long to abandon this "jungle doctor" notion. In most cases they were

valuable allies, and their healthy suspicion of Western medicine was tempered with an eagerness to learn new techniques, provided that they could see results. The project contributed to buying some of their expensive medicinal herbs and other outlandish constituents of their pharmacopoeia. They were also shown the beneficial effects of simple drugs like tetracycline eye ointment. A few months later, after instruction on application, they would be left a couple of tubes (if they asked for them). Basically it was a seduction, relying on mutual respect.

As for the efficiency of Tibetan medicine—who knows? I suspect that many of their potions are useful—the villagers certainly thought so. The amchis were very particular about the ingredients they used and would travel on foot to the remotest areas, well over 20 000 feet, searching for a particular plant or rock. I was more sceptical about the spectacular practice of "meh" (ritual branding with red hot instrument) in the treatment of tuberculosis, epilepsy, and backache. One young amchi spoke to me about his training, which had taken six years with a final examination by five senior amchis on a long case and a series of short cases. When I explained how similar this was to my course he was surprised, not to mention delighted, that we should have adopted their system.

Our second contacts were the primary school teachers in the larger villages. These were often working on the "rehab eh sheat" (village health worker) scheme run by the government.

I found the treks to the remoter villages both exhilarating and exhausting. The highest pass we crossed was Stakspi-La (18 500 feet), and this took two days. We spent the night in a semiunderground stone shelter called a "puloo," at about

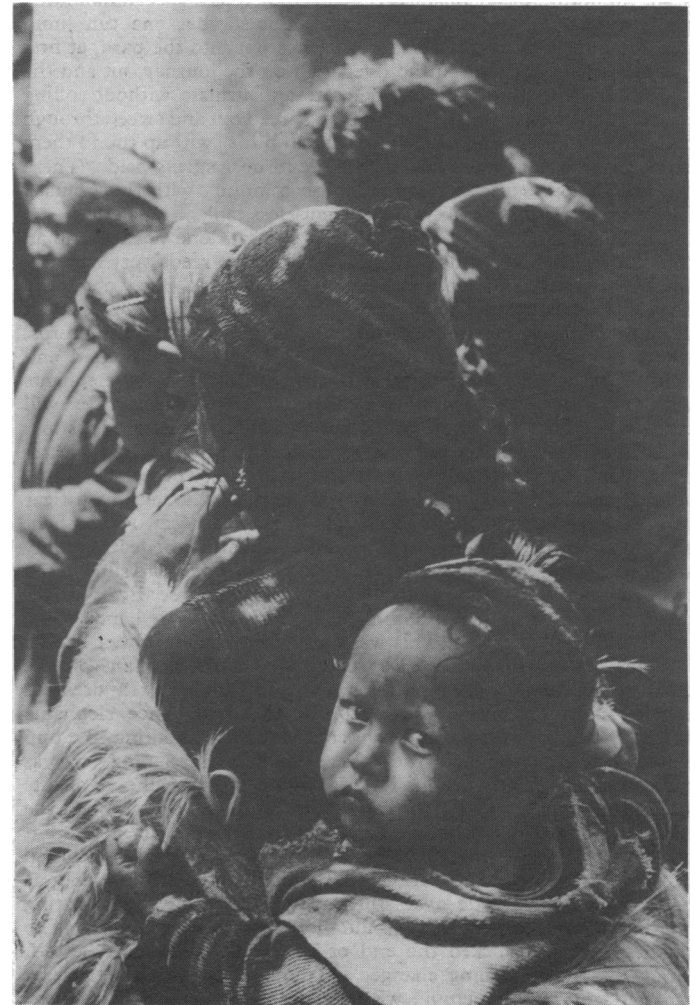


FIG 3—Mothers waiting with infants at a baby clinic.

17 000 feet and cooked dinner on a yak dung fire. Our guide, Rinchen, had had the foresight to bring along a large container of Tibetan barley beer, "chang," which looked like pale green milk and tasted like a mixture of cheap sherry and lager. The fire died down and the wind rose, making the prayer flags flutter wildly on the roof. We all became curiously noisy and clumsy. It is strange the effects that altitude can have, even on the locals. The weather began to break in September, and we were caught in several blizzards. One was on the remote pass of Lanak-La (16 000 feet). I felt embarrassed to be the only person properly equipped for the weather, yet also the only one to be cold and frightened. I decided when I returned to Leh to buy a Ladakhi goatswool coat (goncha) in preference to my climbing waterproofs.

My studies at medical school had not exactly prepared me for all the situations I met in Ladakh. I was confounded by the euphemisms "Hansen's disease" and "Koch's joints" (perhaps I had not listened in the lectures), but I was far more at a loss

when asked to see a horse that had been savaged by a snow leopard. I was alone, and I took a history despite my rudimentary Ladakhi. The horse was horribly injured, but it took me some time to convince the distraught villager that there was nothing I could do to help. It was the family's principal asset. This was the sort of exotic adventure I had been secretly expecting. The reality of my stay was far more mundane; underfed children in unhealthy housing, spots, and coughs. All depressingly familiar. It was obvious what a low priority Western curative medicine must be in tackling the health problems of this community. Should its role in our community be reassessed? In two days I start my first house job. Perhaps I shall learn some answers then.

I thank Professor R Wood, dean of the faculty of medicine, Leeds Medical School, The O R L Wilson Scholarship Fund, Dr John Seaman, overseas medical director, Save the Children Fund, the Dora Ratcliffe Fund, the LNP team, Mr Deen Khan, and members of my family for advice and help.

MATERIA NON MEDICA

A charm of elephants

One of the joys of a visit to the Royal Chitwan National Park in Nepal is to go through the park by elephant. Each of these riding elephants has a large open box on her back which can take up to four passengers sitting with their legs dangling. In addition the driver rides on her head. Mounting the elephant is easy since there is a special mounting platform and the elephant backs under this so that one can jump into the box. The line of elephants swings out into the park, at first in single file. They stop in the river both on the journey out and the journey back so that they can defecate and urinate without soiling the park. Once in the park they begin to spread out and sweep through the dried up gullies and reed beds. Mynah birds swirl up round them from the grass and reeds and wild pig and deer spring aside. There is a tremendous sense of freedom and community with the animals. The elephant proceeds like a benign noiseless tank.

The usual large prey of the safari is the rare one horned Indian rhinoceros. The elephants beat this up from the reeds very expertly and eventually form a loose ring round a rhinoceros. They obviously do not particularly care for the creature but treat it with an insolent disdain and easily contain it in the ring. Fortunately the rhinoceros, which is a fairly powerful animal, is extremely short sighted and tends to make brief lunging runs. It can obviously see the elephants with difficulty and is bewildered by their tactics. A daring driver will take his elephant up to the rhinoceros and indulge in close jousting. This is exciting but on our last safari in the park we had greater excitement. The elephants were working in line when there was a sudden shriek. I looked up in time to see the silhouette of a tiger above the reeds, which grow to a height of about six feet. An elephant had stood on the tiger, whose appearance at that moment irresistibly suggested to me Tiger Tim from childhood comics as it was silhouetted with paws and tail outflung. Pandemonium broke loose. Every driver cried "Tiger" and urged his elephant forward with hands, feet, voice, and elephant goad. This was a nasty instrument rather like an ice pick, with which the driver could strike the elephant on the great resounding cavities of its head, thus producing a dreadful echoing blow and urging the elephant to speed, since elephants normally maintain their own easy pace. Men were shouting, the bull elephant trumpeting and the other elephants screaming—it was quite different from the pursuit of a rhinoceros for the elephants were terrified. I could see the tiger's ears as he slipped through the reeds and in a moment he was gone, not to be seen again. The hunt continued for some time, however. Eventually the elephants gathered in a line sweating and shivering, trumpeting and screaming, and, as part of the sympathetic over stimulation, defecating and urinating on the ground, which they would not normally have done. The smallest elephant sucked the end of her trunk to comfort herself. Gradually the screaming changed to rumbling and as they settled the elephants did something which endeared them to me for ever. They reached out to their companions with their trunks and they

patted each other over head and body and entwined trunks. "Are you all right?" they said. "Are you all right?"

I am fond of elephants.—IRIS I J M GIBSON, consultant physician in geriatric medicine, Glasgow.

Cutting steel

"Where did I come from, Mummy?" is the question every child finds more fascinating than any other; surely it continues to be asked by adults too, but they institutionalise their answers in museums. The museum on Kelham Island, in the heart of the old industrial area of Sheffield, contains more compellingly presented answers even than the Iron Bridge gorge or the Victoria and Albert. In two large buildings (formerly housing one of the very companies whose memory is perpetuated within them) are collected everything that recalls the growth of the industries which made Sheffield's name famous throughout the world—cutlery, tools, heavy engineering, bombs, armour plate, and especially steel—crucible steel, blister steel, mild steel, stainless steel, with today's special steels exemplified in one gallery of turbines, aeroplane parts, and gleaming crankshafts. But the Kelham Island displays cannot be criticised for concentrating on the products while ignoring the producers: scrupulously honest attention is given to the homes and health of the working people, such as the grinders who spent their days bending their backs over a grindstone, which, if it did not burst and mutilate or kill them, would certainly pour its silica into their lungs and make dead men of every one of them by 35.

But pity and horror at the violence of early capitalist society must admittedly take their place beside the nostalgic awe engendered by the sight of a gigantic three cylinder engine in steam. Four hundred and fifty tons of metal, the flywheel alone weighing 51 tons, has been lovingly restored, cleaned, and painted that colour which can be described only steam engine green, all banded with gold and red and surmounted by a large brass plate announcing the place and date of its manufacture, 1905. Three others like it were made at the same time, one of which went to Japan, where I am pretty certain it neither did its work until 1978, like its Sheffield counterpart, nor is now preserved in a museum. These, and other gloomy thoughts, strike one on coming out into the streets again: empty factories and others reduced to acres of level brick rubble are rapidly replacing what constituted, in the valley of the Don, the largest concentration of steelmaking in Europe. British Steel is shrinking so fast that in practice we are becoming surprised to find that any one is still working at the time honoured trades of furnace bricklayer, roller, backer, pickler, fettler, wire drawer, or turner. "Second man" and "the cod" are disappearing terms, and more often we write on our records that most demeaning of euphemisms, "redundant." The health problems, we feel, are only just beginning.—SIMON BARLEY, general practitioner, Sheffield.