HEALTH PROBLEMS OF KHUMBU

A Review of the First Nine Months work at Kunde Hospital

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GEOGRAPHY

The Khumbu region of Nepal lies in the North-eastern part of the country, immediately adjacent to the Tibetan border and encompassing some of the highest mountains in the world.

The area forms a rough triangle with its base lying along the Tibetan border and the apex at the village of Namche Bazaar, the administrative centre for the region.

Two main valley systems radiate North from Namche Bazaar. One, the valley of the Dudh Kosi, contains the villages of Kunde/Khumjung, Phortse, Thyangboche and Pangboche. It ends in the glaciers draining the southern slopes of Mount Everest. The other, runs to the Tibetan border, two days walk away, past the villages of Thami. It ends at the 19,000' Nang-pa-la, the trading pass to Tibet.

There are no roads in the region, the villages being connected by rough mountain tracks. Kathmandu is twelve days walk over the switch-back hills of central Nepal but an airstrip at Lukla, two days walk from Namche Bazaar, makes Khumbu more accessible during the non-monsoon period.

POPULATION

Khumbu is inhabited by people of Tibetan stock, the Sherpas. They number about 3,000. There are 300 Tibetan refugees who fled to Khumbu during 1961 and later years. They have been completely and do not exist as a separate group.

Namche Bazaar is home to almost one hundred people of Nepali racial origin who are concerned with the administration of the region

and with providing police, army and customs services.

Also in Namche are forty people of Kami cast who have been resident in Khumbu for many years. They provide blacksmithing facilities to the Sherpas.

PRESENT MEDICAL FACILITIES.

1. Namche Bazaar Health Centre.

This has been maintained by His Majesty's Government for three years. It has a staff of one 'compounder' and one 'health assistant'. The centre does not have a resident Nepalese doctor at present and because of its isolation has great difficulty attracting and keeping staff.

Kunde Hospital.

This was constructed by a team of New Zealanders, under the leadership of Sir Edmund Hillary, during the latter part of 1966. It has been in effective operation since January 1967.

The main hospital building contains a one room surgery/dispensary and a three bed ward used for acute cases. A separate building houses eight beds for patients with tuberculosis.

Simple blood, urine and staining procedures are undertaken and an X-ray unit produces good quality films.

The Hospital is staffed by a New Zealand doctor, his wife and a Sherpa girl who has received nursing training in Kathmandu. The hospital was built and is entirely maintained with funds raised by public appeal in New Zealand.

Clinics are held at the hospital each day. From ten to twenty out-patients are seen daily, the numbers depending upon the seasonal migrations of the Sherpas. Visits are made to the peripheral villages at about monthly intervals and to Namche Bazaar more frequently. These village visits are of prime importance in demonstrating the benefits of medicine to medically unsophisticated people. They give opportunity to voice a lot of medical propaganda and they allow the doctor to keep in contact with patients too old, or too sick, to make the journey to the hospital.

PROBLEMS OF HEALTH.

1. Acceptance of Modern Medicine.

Apart from the occasional doctor with mountaineering expeditions the Sherpas have had little contacts with modern medical practice.

Families whose members have been involved with expeditions in the past are, in general enthusiastic believers in modern medicine and come readily to the hospital. Many, however, place their faith in the powers of spirit-mediums or the efficacy of lama-medicine and prayer,

Strength of belief in more primitive explanations for disease vary from village to village and within a household. Not frequently a family will call upon the services of lama, spirit-medium and doctor simultaneously, to the ultimate benefit of all parties if the patient gets better.

In the brief period of nine months of hospital operation it is apparent that these attitudes are starting to change. The passage of several years, with exposure to modern medical practice and local publication of therapeutic successes will lead to even greater acceptance.

2. Tuberculosis.

As might be expected in a region remote from medical care, tuberculosis is a major health problem. The hospital currently has 31 patients with various forms of the disease, under treatment. Another fifteen case of clinical tuberculosis are known but for economic reasons, or because of fear or indifference this people do not accept treatment.

In a region of poverty people cannot afford to spend long periods of time away from their homes and work. It has been major problem to organise a scheme of anti-tuberculous therapy which will be sufficiently long term to effect complete cure are prevent the development of resistant organisms.

The present scheme of therapy is as follows. All patients come to the hospital either as residents or out-patients, for an initial three month period of daily therapy. They receive high doses of Isoniazid, PAS and Streptomycin. It is hoped that this initial period of intensive therapy will discourage the rise of resistant organisms if the patient choses to

abandon therapy at an early stage. It also allows time for the hospital staff to present the patients with a barrage of propaganda on the effects of his disease and the necessity for long term treatment. The initial hospital period allows time for the patient to become therapy orientated and on return to their village most have become useful advocates for the hospital.

There have been only two 'drop-outs, from therapy programme. One a cretin child, left after only two days, and the other, a man with pulmonary Is, became symptomatically free after four months and refused further medication.

After three months of daily therapy the patient returns to his home village to receive Streptomycin and Isoniazid twice weekly as recommended by the WHO Tuberculosis Research Center in Madras India.

To effect this village treatment one youth from each of the main peripheral villages has received a three month training course. At the end of this time each boy had an elementary knowledge of health and disease he could administer competent injections and dispense the necessary Isoniazid table. In addition to TB control work each youth serves as helpful 'contact man' during the doctor's visits to his village. At the present time ten patients in two villages are being treated by these 'village nurses'.

A scheme is at present under way to give simultaneous BCG and smallpox vaccinations to the people of Kunde/Khumjung and Namche Bazaar, population 1,200. Before vaccination is undertaken a house to house tuberculin skin test of all children under the age of sixteen is being done.

The Sherpas, although enthusiastic recipients of small pox vaccination are unaware of the benefits of BCG and, in all probability, would be reluctant participants if aware in advance of the long term undesirable effects. It has been decided to give both vaccination simultaneously because of this. In later year vaccination will be extended to all villages in the region.

3. Iodine Deficiency.

In common with most of the world's mountain regions, Khumbu suffers from gross iodine deficiency.

Hardly one resident escapes having a goitre and many of these are gross in size and deformity. A large number of children are born intellectually and physically stunted, many to such a degree that they contribute little or nothing to their family fortune. Many others, although intellectually unaffected, suffer from deafness to such degree that they are mute. This deaf-mutism is believed to be an effect of iodine deficiency during pregnancy.

A team of New Zealand doctors and a physicist made an intensive study of these problems during the latter part of 1966. Their initial reports will shortly be published.

A major part of the work is a six hundred person double blind therapy trial using injection of iodised oil/saline and thyroxine/placebo tablets. It is premature to report any results of this trial, but in another group of six hundred patients treated with injections of iodised oil alone there have been startling reductions in goitre size and considerable physical improvement in those hypothyroid or cretinoid.

Before studies are completed, it is not possible to recommend definitive treatment but it is hoped that this research project will demonstrate an easy, cheap and effective method of controlling the widespread and economically damaging effects of iodine lack.

4. Nutrition.

Malnutrition is very uncommon. The staple of Sherpa diet is potatoes, but they also eat liberal quantities of corn, buck-wheat, green vegetables and barley. Except in the winter months they eat a lot of milk-curd, cheese and butter. It is illegal to kill cows or yaks and because of expense other types of meat are eaten rarely.

The two cases of malnutrition seen have both been cretin children from very poor families.

5. Obstetric

Sherpa women do not suffer from rickets and most have a good obstetric pelvis. Difficulty in labour is not common although five uncomplicated forceps deliveries have been performed.

Death from post-partum haemorrhage in multiparae occurs but the author has not seen a case.

Ante-natal care is encouraged. Thirty-six women in villages adjacent to the hospital have received frequent ante-natal attention and many women in distant village have been seen at less frequent intervals.

Despite encouragement, not one woman has been delivered at the hospital.

6. Birth Control

Encouragement is given to all woman of child bearing age to accept the idea of contraception.

Intra-uterine device have been inserted into twenty-seven women and it is hoped that others will follow as the procedure becomes more widely known and accepted.

Vasectomy has not been attempted.

7. Leprosy.

This disease exists in spordic form. No close contact transmission has been detected, At present five case of lepromatous and one case of tuberculoid leprosy are receiving treatment in their own homes.

8. Other Medical Problems.

Chest infections are common particularly during the winter months when acute bronchitis pneumonia and exacerbations of chronic bronchitis are frequently seen.

Bacterial conjunctivitis is also common. This, and the chest infection are precipitated by the very smoky conditions existing in Sherpa homes. Perforating corneal ulcers are not uncommon in those presenting late for treatment.

Infestation with round worms is almost universal amongst children and common amongst adult also. Many Tibetans and some Sherpas are infested with tapeworms, reflecting the Tibetan habit of eating dried raw meat.

One unusual condition, common amongst children, is myiasis subcutaneous infestation with fly larvae.

Impetigo is a common childhood complaint but measles, mumps, chicken-pox and whooping-cough have not been seen.

Adults and children alike suffer from chronic otitis media. Most have such grossly scared drums that only tympanoplasty would effect a cure.

Congestive heart failure, apparently secondary to chronic chest disease is not uncommon amongst the elderly. Hypertension and the effects of arteriosclerosis are not seen.

Extraction of grossly carious teeth is frequently undertaken.

9. Surgical Condition.

Condition requiring surgical procedures present infrequently. Acute surgical conditions have been seen but all patients have refused hospitalisation when seriously ill because of their great fear of dying away from home.

Curettage, skin grafting for burns, incision of abscesses, minor amputations and suturing of lacerations are the only surgical procedures thus far done.

Senile cataracts are not uncommon and extraction of this will be undertaken next year when ophthalmological equipment is available.

SUMMARY

A survey is given of the first nine months operation of small hill hospital serving a remote area.

An outline is given of the medical, geographical and social problems encountered.

Much of the work is concerned with preventive medicine.

Surgical problems are uncommon.

A scheme of tuberculosis treatment suitable for isolated regions is outlined.