In November 2010, one of the authors (JR) was lucky enough to be offered a place on the International Nepal Fellowship mission to Far Western Nepal, working in their long established 'Ear Camp'. He relates his experience, followed by that of the supervising author (CC).

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Remote anaesthesia in Nepal – a trainee's perspective

The personal and professional benefits of undertaking anaesthesia in remote and poorly resourced settings have been well documented by consultants. However, whether such ventures can also benefit relatively junior trainees, adequately supervised, is less well documented. This was the first time an anaesthetic trainee had attended such a camp, and the experience demonstrated the innumerable professional training benefits, as well as being hugely rewarding personally.

'Namaste!' In at the deep end with the International Nepal Fellowship Camps

Namaste is a term of greeting, commonly used in India and Nepal. The camps are part of a project run by the International Nepal Fellowship (INF). This is an international Christian mission, which has had a presence in Nepal for over 50 years. The INF has rolling five-year arrangements with the government of Nepal for its projects, many of which are fully integrated into Nepali government health and educational programmes. The camps section includes ear, gynaecology, general surgery, plastics, dental and general medical services.

Baitadi Ear Camp, Far Western Nepal – November 2010

The last 'ear camp' of the year was held in the Patan Valley in the Baitadi district of Far Western Nepal. This remote and inaccessible area is a two-hour plane flight, followed by an eight-hour '4 x 4' drive from Nepal's capital, Kathmandu, into the high foothills of the western Himalayas. The western areas were

the centre for the recent Maoist insurgency, precipitated by poor development that included the health services, and which eventually overthrew the incumbent government.

The Baitadi district is one of the poorer districts in Nepal. The last available United Nations report, published in 1995, estimated its human development index score to be 0.229. This ranked it 60th out of the 75 Nepali administrative districts, and gave it a similar score to many countries in impoverished West Africa.

The ear camp was held in a health post, which is normally manned by paramedic level staff serving the local community. The sevenday camp focused on ear disease, with one general practitioner, three audiologists, one district nurse, four ENT consultant surgeons,

about ten to 12 years, children with confounding congenital disease such as cerebral palsy, or highly anxious and uncooperative older children.

Camp statistics

In a seven-day period, 121 ear operations were performed.

Three operating tables were set up in one room, with an anaesthetist responsible for each table. Despite the basic infrastructure, this proved to be an excellent training environment that enabled both verbal and occasionally practical support from the senior consultant in the earlier stages, and during more complex situations.

A trainee comes of age

JR writes:

I was responsible for my own independent list, and carried out 38 anaesthetics alone after my first case was performed under direct supervision. The operations are listed in Table 1 below:

18
myringoplasties (one under supervision)
8
tympanoplasties +/- ossiculoplasty
8 mastoidectomies
1 attico-canthotomy
3 insertion of grommets
1
removal of dressings under ketamine

different when compared to that in the ‘western’ world. A lack of

sophisticated monitoring, anaesthetic equipment, familiar drugs and an onward referral centre, have all influenced the development of the safe technique that is now used and preferred.

The standard technique comprises intravenous pentazocine combined with diazepam for sedation, followed by a local anaesthetic ear block with a mixture of lignocaine and bupivacaine with 1:80,000 adrenaline. The standard adult sedation dose used was 30 mg pentazocine, with 5 mg diazepam. Although challenging at first, the ear block, with its obvious landmarks, was a relatively straightforward block to perform with increasing competence and confidence. The block consists of an external ring block of the ear, followed by two deeper injections to block the post auricular branch of the vagus nerve and the auditory branch of the trigeminal nerve. This is followed by infiltration of the internal auditory canal with a further ring block, which takes some practice and patience to place at the correct level.

Variations on the standard adult technique included low dose ketamine to cover the block, after a pro rata dose of sedation. This was the technique of choice in children under the age of two anaesthetic consultants and one anaesthetic trainee making up the visiting expatriate team.

The INF local Nepali team undertook all the support work, including turning the health post into a fully functioning surgical unit, with everything from electricity generators to operating microscopes.

Major surgery in the middle of nowhere

Patients were assessed, and minor disease was treated in the outpatient department by the ENT specialists or the GP. Patients with hearing defects were referred to the audiologists for audiography assessment, together with an evaluation of their hearing defect. Depending on the type of hearing impairment, the patients were fitted with hearing aids or, on consultation with the ENT specialists, referred for corrective surgery.

Typical operations included

mastoidectomy for advanced cholesteatoma, tympanoplasty with or without ossiculoplasty, myringoplasty, and insertion of grommets.

How to anaesthetise an ear (halfway up a mountain)

The technique for anaesthetising for middle ear surgery, in a remote location such as this, is very

local anaesthesia!), I feel that the non-technical skills that trainees need to acquire, which are harder to quantify, have been enhanced greatly by this experience.

View from the 'top'

CC writes:

It is excellent to read and see what a positive effect this experience has had on a second year trainee. Virtually doubling 18 months worth of solo cases in seven days obviously is beneficial, but to undertake all comers and all ages in such a demanding practical and cultural environment, and to work with senior surgeons one has not met before, is a serious challenge. Delicate major ear surgery under LA and light sedation is no 'walk in the park' (or in the mountains, come to that!). This is a transforming experience for the modern trainee coming from our own tightly controlled methods of training, provided the support and supervision are in place.

Misconceptions encountered by a newcomer

JR received a very mixed response from colleagues when it became known that he was leaving for Nepal with the INF. Some of these are listed below together with his observations:

They're a 'Bunch of Christian do-gooders' – the expatriate team was leaving to go to Nepal. At that time, my logbook had 654 anaesthetic cases after 18 months of anaesthesia. Of these, 180 were listed as 'indirect supervision'. This can mean anything from the consultant on the list being mostly outside theatre and 'locally available', to performing essentially solo. It is interesting that I had done just eight lists during which I have been classified as a solo anaesthetist (with a total of 42 patients). Although

these are included in my 'indirect' supervision category, they were of great training benefit because they entailed seeing the patients, formulating an anaesthetic plan for the list, and executing it by myself. In contrast, I performed one fully supervised anaesthetic followed by 38 solo anaesthetics in Nepal, and that effectively almost doubled my total number of solo anaesthetics in just one week.

This experience taught me so much with regard to the management and planning of a list, getting myself out of trouble safely and without necessarily calling for help, and gave me the confidence to practise independently. Although the specific anaesthetic technique does not entirely relate to practice in the UK (I don't imagine many patients would want a mastoidectomy under

In order to measure the quality of the anaesthetic technique, the blocks were scored as good, moderate, or poor, according to the following criteria:

Good – no requirement for further unplanned sedation, other than hourly top-up, and no requirement for additional local anaesthesia (LA) to be infiltrated by the surgeon. Essentially a smooth case with no disturbance.

Moderate – further sedation required to complete the procedure, but no further LA infiltrated.

Poor – further sedation required, difficulty in settling the patient, and extra LA infiltration required.

Of my 39 anaesthetics, 31 were classed as good and seven as moderate, with one as poor. In general, the quality of my performance improved during the week, and ended roughly comparable to that of one of the consultants who was also not experienced in the technique, and approached that of another consultant then in his 17th year of camps! Certainly, the majority of cases went smoothly and, in all cases, I achieved the primary objective of safe, complete surgery and a content patient.

Is it useful as an anaesthetic trainee?

It is interesting to reflect upon my training numbers up to the point of

Dr Collins, the lead consultant anaesthetist on the camp, has launched a multidisciplinary, multiprofessional network for health workers interested in this sort of activity. The Going Overseas Network (GON) includes opportunities for trainees to put themselves forwards for consideration. The next meeting of the GON is on Thursday, 1 September 2011 in Bristol, and more information is available on the website: www.goingoverseasnetwork.org.

'Aid work of no training benefit, just a holiday' – I have doubled the number of solo cases that I have performed with appropriate, but not overbearing, support. I have also gained multiple benefits, both personally and professionally.

Conclusion

For JR, the whole experience has been very rewarding. He has expanded his professional capabilities and pushed personal boundaries. We would recommend going abroad to do anaesthesia to any trainee as long as there is adequate support. It broadens horizons professionally as well as exposing oneself to a foreign culture. Now, surely that has to be a good training experience?

of mixed ethnic, gender and religious backgrounds. I certainly didn't notice any preaching or religious recruiting. The overriding feeling was of being there to do the best job possible.

You'll be 'Performing procedures on native populations to what would be considered an unacceptable standard in the UK' – we had four specialist ENT surgeons and two highly qualified anaesthetic consultants who, I am sure, would in no way want to be associated with the delivery of substandard care. The patients were informed and consented and full anaesthetic records were kept. As well as individual attention from an anaesthetist, oxygen saturations were monitored throughout and supplementary oxygen was available if required.

Photos:
(page 9) Major op just finished; off the table and home for rice!
(page 10) The Himalayan foot hills, (page 11) A good week's work,

(page 12 – left) A bridge on the way to camp, crossing to another world,
(page 12 – right) Health Post waiting area becomes an operating theatre