Conference Report

Expedition medicine

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"You must live dangerously as carefully as possible"—sage words from F Spencer Chapman in his *Life Should be an Adventure*. Writing in the 1930s, he put forward the idea that all of us, from the brave to the not so brave, have a feel for adventure. He saw that a heightened sense of awareness could be reached by facing and overcoming danger, through braving the elements and tackling nature in the raw, a sense that some people achieve only through the experience of war. Was it an unconscious recognition of this that led me to a course on expedition medicine at the Royal Geographical Society? Whatever the motive, after an evocative glimpse of remote lands I was straining at the leash to take on rather more than the crawling Kensington traffic I met on my way home.

Walk into the Royal Geographical Society and you walk into another world where sepia tinted portraits of the great explorers gaze down on the less intrepid. The meeting was aimed at medical officers, whether doctors, nurses, or non-medical people, who are interested in going on expeditions abroad. It was opened by Sir Vivian Fuchs, president of the Royal Geographical Society, who introduced us to the challenge of mounting an expedition. He also put the often subsidiary, if important, role of the medical officer in perspective. Nigel Winsor, the Royal Geographical Society expedition officer, then launched into a description of the "average" expedition. He portrayed a sickly thing suffering from lack of funds, ill defined objectives, and poor planning. (Does this remind you of anything else?) But worse, it was made up of untrained enthusiasts ignorant of the foreign terrain, who meet each other for the first time on the airport tarmac. Not a flattering image, but a good introduction to the main theme of the course: no expedition is likely to be successful unless all aspects are carefully planned well before departure.

Why go on an expedition?

The medical officer must know what the purpose of the expedition is. He is then in the position to ask himself a few questions: Is this a realistic aim? How well will the expedition leader handle a crisis? Can he get on with people, motivate and organise them? Above all, Why is he going to this particular corner of a foreign field—what will he get out of it? Try to complete this philosophical thumb nail sketch before you get bogged down with routine tasks. These will include a critical look at local health problems and medical facilities, and then making sure that the expedition sets off with adequate and appropriate supplies of drugs, dressings, and equipment. The general health and vaccination status of the team must be checked, and, to look on the gloomy side for a moment, name and next of kin should be noted.

Plan, plan, and plan again: the message was reinforced by Dr Bent Juel-Jensen, the course director. He pointed out that

Main supply route by long boat on the Royal Geographical Society's Mulu Expedition, Sarawak, East Malaysia.

the commonest cause of morbidity and mortality on expeditions is an accident, especially a road traffic accident, with tropical disease coming way down on the list. With this in mind he advised the medical officer to urge all the members of the team to take out fully comprehensive health insurance policies. Additional pre-expedition precautions include vaccination, malaria prophylaxis, and gammaglobulin to protect against hepatitis. A precautionary visit to the dentist is a good idea, for toothache is not a romantic disorder with which to be invalidated home. Spare spectacles and a tin of flea powder from your local pet shop seemed less obvious but no doubt essential items for some. This pragmatic advice was illustrated by some fascinating slides, one of which showed a bed in the "rabies room" of a hospital in Nepal complete with iron shackles to restrain its victim. Torture chamber or place of healing, it served as a grim reminder to get vaccinated against rabies.

The medical officer must also try to ensure that all members of the team are fit before they leave home. How fit depends on the nature of the expedition, but we were warned against the laissez faire attitude that presupposes that the occasional jog around Hampstead Heath (or your favourite equivalent) is proof that one will be able to scale the Himalayas or even much less exotic but still physically demanding venues.

Malaria is still a threat

Malaria rightly dominated an hour of the course, and Professor H M Gilles reminded us that there has been a recrudescence of malaria in recent years, with the added problem of the increasing resistance of *Plasmodium falciparum* to chloroquine,

an increase that necessitates an update of his slides roughly every three months. The major problem areas are in south east Asia, South America, and isolated pockets in east Africa. Since there are no pathognomonic symptoms or signs of the disease doctors must retain a strong index of suspicion. Patients suffering from cerebral malaria should undergo routine estimations of blood sugar concentrations, because spontaneous hypoglycaemia is an important cause of fits in such patients. Malaprim (dapsone and pyrimethamine) and Fansidar (sulphadoxine and pyrimethamine) are now the drugs of choice where chloroquine resistance is established or suspected.

The next topic was first aid, and in a masterly one man show Dr T Ryan enacted the major sections of the *First Aid Manual*. This readable and well illustrated book is the authoritative manual of the St John and St Andrew's Ambulance Association and the British Red Cross Society, and costs £2.95. Medical officers should make quite sure that all their equipment is in good working order before the expedition sets off. Turning to more esoteric forms of first aid, Dr Alistair Reid gave advice on how to manage a patient who has been bitten by a snake. With the wisdom of many years' experience he went through almost every conceivable hazard but focused on two simple points. Firstly, not all that bites envenoms, so that immediate treatment should be reassurance and analgesics. (If there is no local swelling two hours or more after the bite, serious poisoning is most unlikely.) Secondly, antivenom is expensive and has more than a sporting chance of inducing anaphylactic shock. Reserve it for patients who develop clear signs of systemic poisoning—namely, general myalgia half to two hours after the bite with pain on passive movement of trunk or limbs, abnormal bleeding—which may occur within 15 minutes—and later myoglobinuria. Antivenom must be given slowly intravenously, and don't forget to have some adrenaline drawn up in a syringe at the ready. Finally, on a more reassuring note, and to take my mind off the picture of the spitting cobra coiled up in the lavatory, there has been only one death recorded between 1959 and 1972 from snake bite in Britain, and even in less tame environments lethal bites are extremely rare.

The importance of hygiene

No course on expedition medicine could possibly be complete without mention of the ubiquitous problem of travellers' diarrhoea. This was fully covered by Dr S G Wright, who ended his talk with a plea to "hold back" on prophylactic antibiotics, which he thought did little more than encourage bacterial resistance. Since most infections are acquired through ingesting contaminated food and water, take sensible precautions. Either boil water for 10 minutes before drinking it or sterilise it by filtration followed by chlorination or the addition of a 2% solution of tincture of iodine. Cook all food thoroughly, and if you want to eat native prepare the food in exactly the same way as the locals do. Another important aspect of hygiene is the judicious placing and regular disinfection of latrines. If the camp is permanent a "long drop" of 20 feet or so is desirable. If team members develop diarrhoea and vomiting ensure that fluid replacement is adequate. The choice of an antidiarrhoeal tablet is idiosyncratic. From charcoal tablets to codeine phosphate everyone has their favourites, although none of them are really recommended by the purists. But once afflicted, hypothetical contraindications do tend to go by the board.

Surgeon Commander Paul Clark RN brought the audience to attention in his concluding talk on the evacuation of casualties. It is important to establish with the expedition leader before you go what cases you will manage yourself and what will have to be evacuated. (Surgery in the field is never advisable because it is impossible to maintain sterility.) The feasibility of different "casevac" methods will depend on the terrain—work out a plan of action before the crisis occurs. A radio link with the "civilised" world is advisable, and you should establish a home based consultant contact to whom you can turn for advice.

He left us in little doubt about the characteristics of the ideal medical officer: an all rounder with common sense and the ability to communicate with people, and enough insight to recognise that flagging morale needs as vigorous treatment as clinical disease. He should also respect local medical customs, for empathetic treatment of the local population can have positive spin off's for the whole expedition.

Setting up a base camp

The second day of the meeting was devoted to the practical issues of setting up a base camp medical service and a detailed description of field equipment and medical kits. Group sessions were then held on specialist topics such as high altitude medicine and medical care appropriate for desert, forest, marine, and caving expeditions. It was a fascinating weekend, conceived and organised by the staff of the Expedition and Advisory Centre. The centre was set up and is jointly administered by the Royal Geographical Society and the Young Explorers Trust to provide an information and training service for anyone planning an expedition. They keep a register of prospective expeditions together with details of over 1000 previous ones and a list of medical officers willing to go on trips. They can put you in touch with specific consultants and international organisations with local knowledge and expertise. Further information can be obtained from their offices at 1 Kensington Gore, London SW7 2AR, telephone 01-581 2057.

If this has not whetted your appetite I suggest you get a video copy of the film that was shown of the Royal Geographical Society's expedition to Sarawak in 1978. If the swirling mists around the Green Mountain don't stir that latent spirit of adventure, nothing will.

A patient has a classic cervical disc lesion, for which he wears a collar. He finds that a car seat belt comes across his shoulder and causes considerable discomfort, so that at times he is unable to tolerate it. Would discomfort of this degree justify exemption from the legal requirement to wear a belt?

The Motor Vehicles (Wearing of Seat Belts) Regulations 1982,¹ provide no specific medical grounds for giving an exemption certificate. Each case has to be decided on its own merits. The Medical Commission on Accident Prevention has produced guidelines for practitioners regarding medical exemption.² It is expected that doctors will "balance very carefully indeed the advantages to the patient of reducing the risk of injury or death against any reason the patient may give for seeking exemption from wearing a seat belt." A properly applied seat belt, particularly of the inertia type, does not restrict movement except on impact. In particular it does not prevent rotation of the trunk when the car is being reversed. In any case the Act does not require the wearing of seat belts while reversing. If a particular seat belt is uncomfortable it should be changed for one of another type or the car seat should be adjusted. In a patient who has a neck lesion wearing a collar would prevent the belt from rubbing on the neck. If the patient is immobilised to such a degree that it is impossible to wear a seat belt or to move the neck at all he is probably suffering from a "relevant" disability that should have been notified to the appropriate licensing authority.³ In other words he might be considered as unfit to drive. Mild discomfort caused by a seat belt crossing the shoulder would not constitute grounds for exemption. If the discomfort is severe and disabling the patient may not be fit to control a vehicle in the first place. The question does not arise with regard to passengers, as they may travel in a rear seat, where wearing seat belts is not compulsory. A passenger who objected to wearing a seat belt could not, therefore, ride in a two seater car.—S C GALLANNAUGH, consultant orthopaedic surgeon, Hastings.

¹ Road Traffic. *The motor vehicles (wearing of seat belts) regulations 1982*. SI (1982) No 1203.

² DHSS Family Practitioner Services, Health Service Management. *Medical exemption from compulsory seat belt wearing*. HN(FP)(82)23 HN(82)29. (Available from Health Services Division 2C, Hannibal House, Elephant and Castle, London SE1 6TE.)

³ *Medical aspects of fitness to drive—a guide for medical practitioners*. 3rd ed. London: Medical Commission on Accident Prevention, 1976.