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SPECIAL EDITORIAL

The Himalayan Rescue Association: history of a wilderness medicine experience

During our daily altitude illness lecture, at about 3:30 on a frigid and foggy afternoon, the door to the Pheriche clinic slammed open to reveal the sweaty, anxious faces of two European trekkers and their Sherpa guide.

"Come fast, please, our friend, dying, very blue."

Another result of 'too high, too fast?', I wondered, as I sent my partner off on her first altitude illness rescue.

One hour and 3000 feet higher in Lobuche (16000 feet), Gunther, a 35-year-old Austrian man, was found slumped over a yak herder's wall, deeply cyanotic and barely conscious. After a brief hour in the portable pressure bag, Gunther was still confused, but asked to eat and be allowed to leave the bag to urinate. Still very much ataxic, he was barely able to sit supported on a yak. In part because the man was 6′7″ tall, descent to the Himalayan Rescue Association (HRA) clinic was a slow and arduous four hour task. Pulse oximetry in the clinic revealed Gunther's oxygen saturation to be 82%. His physical exam showed gross ataxia, scattered pulmonary rales, and confusion. He required two more pressure bag treatments, aggressive medical therapy, and a night's observation.

Gunther's pulmonary and cerebral edema responded fairly well to treatment, but the event unmasked underlying psychosis, challenging our skills and resources. In his emotionally decompensated state, the patient uncontrollably defecated and urinated on himself and his sleeping bag, and then proceeded to fling excrement all over our treatment room. He withdrew from us, assumed the fetal position, and preferred to be naked and cold in his soiled bag. The *real* problem arose in the middle of the night when Gunther's trekking leader panicked and demanded irrationally that Gunther be helicoptered out immediately. The woman raged without reason, as there was neither a way we could communicate with Kathmandu at night, nor would a helicopter pilot fly through the mountains in the dark. We were very tempted to inject her with the haloperidol we held for Gunther. As things turned out, Gunther survived the night better in his out-of-touch state than did the rest of us. After a good scrubbing and baking in the morning sun, under the watchful presence of Ama Dablam, Gunther was escorted down the mountain trail on foot by group members, still mildly ataxic. Rattled by the night's events, we mused, "Is this what wilderness medicine is all about?" It was our second day of a two and a half month stint with the HRA in the Nepal Himalaya.

The Himalayan Rescue Association has become a flagship of wilderness medicine experiences for physicians. Nowhere else can one find a more intoxicating mixture of third world medicine, high altitude illness, adventure, and mountain culture. Today, there are two aid posts where volunteer physicians may be assigned to work: Pheriche at 14250 ft (4340 m) in the Khumbu on the trek to Everest base camp, or Manang at 11500 ft (3500 m) on the Tibetan plateau at the apex of the Annapurna circuit. Each

location has a delightful and unique flavor all its own, so many choose to spend a trekking season, two and one half months, either before or after the summer monsoon, in each.

Tourism in Nepal is booming, perhaps even out of control, as at least 200000 tourists visit the mountain kingdom each year. Fifty thousand trekkers are within this group. People come from all over the globe with varying levels of mountain experience, from rank novice to elite high altitude mountaineer. The sheer number of visitors and their diverse health educational backgrounds precludes the HRA or any other group from being able to effectively prevent acute mountain sickness (AMS). However, it is the HRA's goal to try to minimize trekking-related AMS morbidity and mortality. Cutting edge rescue techniques and AMS treatment are key, but the cornerstone continues to be prevention through education. Daily altitude illness talks have become an HRA clinic tradition. Twenty years ago, before the inception of the HRA, the incidence of trekking-related deaths in Nepal was estimated to have been approximately 1:1000. Now, I believe largely through the efforts of the HRA, that number has decreased to about 1:15000, with only 1:40000 AMS deaths.

A Peace Corps volunteer, John Skow, started the HRA in 1973. He had seen enough evacuations and deaths as a result of AMS to believe that it was the responsibility of the trekking agencies to ensure client safety. With the aid of John Dickinson, MD, an internist interested in altitude illness working at a local Kathmandu hospital, and three trekking firms, the HRA was organized as a Nepali volunteer organization. The initial approach was simply to place nurses in Pheriche on the popular Everest trek. The Annapurna 'circuit' did not open to trekking until 1978.

For the first few trekking seasons, HRA volunteers worked out of a rented yak herder's hut, but the cold, bitter winter months forced them down to practice near the Buddhist monastery in Thyangboche. Pheriche, a summer yak pasture, is not hospitable year round, even to the hardy Sherpas. The only reason they stay there now through the harsh winter is to provide service for the increasing number of off-season trekkers.

It wasn't until the Tokyo Medical College, through the efforts of Professor T. Hayata, a thoracic surgeon, built the present building in Pheriche in 1975 as a high altitude research post that the HRA could work in relative comfort, conduct daily lectures, and undertake serious research. The clinic was funded completely by the Japanese, who had previously operated a research facility and clinic out of the Everest View Hotel in Syangboche, above Namche. Because foreigners are not allowed to build houses or own land in Nepal, the Japanese 'donated' the building to the HRA, a Nepalese organization, in order to be allowed to build it. The two organizations then shared the facility.

Predictably, there was initial confusion as to who would staff the facility. Many times, the Japanese would send personnel regardless of arrangements made by the HRA. For a few years, the Japanese came only in the winter; the HRA appointed doctors for the spring and fall. Two years ago, the Japanese formally relinquished control of the clinic, which unfortunately has greatly diminished their participation. Because there is no Japanese doctor at the clinic, Japanese trekkers bypass it altogether, and miss an opportunity for preventive education. Still, AMS brochures are made available in several languages, including Japanese.

Peter Hackett, MD, has become synonymous with altitude medicine and the HRA. His first published study on acetazolamide appeared in *The Lancet* in 1976[1], a year after he first began working as a volunteer for the HRA. Much of what we know about

AMS has since come from the Pheriche aid post.

Peter assumed medical directorship through the HRA's early years. In 1982, that role was turned over to another volunteer, David Shlim, MD, who had moved to Kathmandu to begin working at the CIWEC travelers' clinic. Today David is assisted by Gil Roberts, MD, in staffing the HRA aid posts with volunteer, English-speaking physicians from around the world.

Funding has always been shoe-string for the organization. It is not bankrolled by the Nepal government, as one might expect, even though it provides what has become an expected service which directly benefits Nepal's lucrative trekking industry. The HRA receives a small donation from the government each year, but Nepal is simply too poor to fund health care for foreigners. Initially, donations were the sole means of support. However, the economic realities of staffing a clinic and obtaining medical supplies demanded initiation of a fee-for-service system. Basic consultation fees are currently 250 rupees ($8 US) for trekkers and 5 rupees for Nepalis. More than one half of the HRA's revenue is from donations, with the remainder from service fees and the sales of HRA patches, T-shirts, and locally-made crafts such as the popular Mani-Stone, which is a small replica of the larger stones seen on Mani or prayer walls throughout the Buddhist Himalaya with the Tibetan inscription Om-Mani-Padme-Hung. Many regular stones were being stolen from these walls as souvenirs by trekkers; Peter Hackett came up with the idea of making small replicas to sell in an effort to both stem the desecration and generate extra income for both the local economy and the HRA. Still, it is a financial struggle to remain open season to season. The HRA would like to staff its posts through the winter months, but cannot afford to do this until the numbers of off-season trekkers has increased to the point of profitability. There is certainly a need for winter staffing, as traditional trekking seasons are being obscured by visitors desiring to trek at their convenience, regardless of the season.

By the early 1980s, it was more than apparent that the HRA was very successful in its goal of reducing morbidity and mortality in the Khumbu from altitude illness. With increasing popularity of the Annapurna Circuit, the HRA expanded its services in 1982 by placing a second aid post in Manang. There too, until recently, volunteers worked and lived out of tents on top of a rented home. In the 1991 season, volunteers began working out of a new facility funded by the British government. Both posts are busy enough that two volunteers are appointed to each clinic in each season. There is some time for assignees to get away and explore, provided that they have the appropriate permits.

Manang, though historically less significant than Pheriche to the HRA, is every bit as intense on the AMS level, and is perhaps the real jewel of the HRA experience in terms of overall cultural and clinical breadth. The people of Manang, while less outwardly cheerful than the legendary Sherpa, are every bit as colorful and mysterious. Descended from the warrior Kham of Tibet, they are highly skilled traders and horsemen. Once befriended, they remain loyal friends. The Manang people are among the wealthiest of the Nepalis, so the government, viewing their wealth and traditional ways as a threat, has gone to great measures to curtail their legal and illegal trading practices. The Manangi don't seem to notice and the wealthy ones continue to flaunt the spoils of their success in Kathmandu: gold watches, motorcycles, and property. The more traditional Manangi remain in Manang.

About half of the medicine in Manang is directed towards the locals. You can expect to pull many rotten teeth, take care of the ubiquitous 'Dukcha', or aches and pains, and

be a veterinarian to the herds of yaks, horses, and sheep. You will also see your fair share of AMS, along with western afflictions such as blisters, diarrhea, and homesickness. The Annapurna Circuit is now the most travelled trek in Nepal. The 28 day trek around the Annapurna Himal takes you through the entire geological strata of Nepal: from the humid depths of the deepest river valley in the world, the Kali Gandaki, which runs between the looming giants of Annapurna and Daulaguiri, to the desolate heights of the Tibetan Plateau and the 17 700 ft (5400 m) Tharong La pass. This is the realm of Maurice Herzog's classic mountaineering epic *Annapurna*, which describes the first ascent of an 8000 m peak.

It is difficult to come away from Nepal after three months without being a changed person. You see the world differently. Perhaps, it is the Buddhist calm and spirit that seeps in or the mountain spirit that gives you insight into your place among other living things. You learn new ways of practicing medicine and begin to understand what 'holism' is all about. You understand that holism is good, essential. You learn that it is the little things you do that matter. People appreciate you for just being there. You drop your shields of defensive, legal medicine and really learn to care for people. It is not the sort of thing you can convey in writing or even spoken description. Serving the HRA in a wilderness medicine experience allows you inroads to these new ways of seeing and feeling. Certainly, you will have a firm clinical grasp over the ins and outs of AMS. Probably, too, you will have a better grasp over yourself. The magic of Nepal never leaves you. You will often dream of going back; if you are lucky, you will return.

References

1. Hackett, P.H. and Rennie, D. The incidence, importance, and prophylaxis of acute mountain sickness. *The Lancet* 1976; **2**, 1149–55.

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