JULY CASE DISCUSSION

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***Q**uestion 1. A 45 year old hypertensive (treated) man with stable chronic renal failure (CRF) and well-controlled epilepsy wishes to travel on a 4 week remote trek in the Kangchenjunga region of Nepal. He has not told the trekking company about his medical history. There is a doctor accompanying the trek who has no previous experience of wilderness/high altitude medicine. The patients general physician contacts you for advice - what would you say?*

Brownie Schoene, USA
Cancel the trip and go to Hawaii instead.

Stephen Bezrushka, USA
As i always answer, it depends on the motivation of this man, how important it is for him to do this, and whether he accepts the unknown but increased risk of altitude, and difficulties of getting help.

John Severinghaus, USA
I would like to know more: 1) How high the trekkers will go. 2) Is he on diuretics? 3) Does he have edema? 4) Is he acidotic or alkalotic? 5) Has he been at high altitude before and if so how did he fare?

The epilepsy probably is unimportant. Even if he seizes it is self limited and the doctor can presumably attend the minor effects, tongue biting, incontinence etc.

That he hasn't told the trekking company doesn't say whether he chose not to or simply hadn't yet done so. If the former, he should be advised not to go on these grounds alone. If he plans to tell them and ask their permission and counsel, then the referring physician will have the choice. If his renal failure creates edema, or alkalosis from Cl- loss I would say don't go. If he has no edema and is normal or acidotic he can probably tolerate it. But if he has not tried altitude before, he should try it on Pikes Peak or some other place overnight first. A problem is if he gets into HAPE diuretics may not work well.

Buddha Basnyat, Nepal
I do not know if telling the trekking company will make a big difference. They will at the most say get an OK from his physician. Were his seizures brought on by CRF? If so then if his CRF is under control he can probably go on to high altitude as well controlled hypertension is not a contraindication for going to high altitude. However if his seizure was idiopathic I would like to know how long he has been seizure free. If seizure free for more than 2 years he is probably OK to go but he should be told that some people with a past history of seizure have seized in the mountains even after a long seizure free interval. I would tell him to stay away from seizure threshold lowering drugs like ciprofloxacin (commonly used diarrhea in the mountains). I would make sure the treating physician knows about seizure management. If he has had more recent seizures like within a year or so I guess I

would caution him about going although the data is not there to support me. If I were the patient I would also make sure and buy helicopter insurance for evacuation if necessary and register my name in my embassy in Nepal.

Erik Swenson, USA
I would advise against this man taking the trek. Without details of his medical history or severity of his renal insufficiency, I lean to be being very conservative. What concerns me is the potential for trouble if he becomes dehydrated, which is not a trivial problem (gastroenteritis, insufficient clean water, insufficient intake relative to normal losses (respiratory and cutaneous). Both dehydration and poor control of his blood pressure (the latter as a consequence of hypoxemia) could put his renal function at some risk. I haven't any idea of the consequences of hypoxemia on metabolism of his epileptic medication, but if it is a drug with a narrow therapuetic index, this may alter his otherwise well treated epilepsy. Fits and renal failure won't make for a pleasant sojourn in the hills.

James Milledge, UK
This 45 year old man has more than his fair share of problems but they are apparently all under drug control. Would altitude be expected to make any of his problems worse? Although the BP sometimes rises in healthy subjects, Halhuber et al. (1985) found that hypertension does not get worse at 3000 m and there were no cases of heart failure or CVAs in almost a thousand patients. There may be a rise in pressure early in acclimatisation with increased sympathetic drive and Hultgren advises that the pressure be checked and an increase in anti-hypertensive drugs given if indicated. I would be cautious in this, however, as postural hypotension is also common on arrival at altitude. As regards chronic stable renal failure I know of no evidence that altitude makes matters worse. Obviously dehydration must be avoided. Epilepsy, as far as we know, is also not made worse by altitude and Clarke found that well controlled patients are not at particular risk of seizures at altitude. So theoretically it should be all right for this patient to go an a trek assuming he is otherwise fit and can manage a good hill walking day at low altitude without trouble. However the combination of these three problems in one individual should make one pause. He should certainly discuss the problem with the trek doctor and trek leader and only go if they are happy with the responsibility. He should take a generous supply of medication with spare drugs and rescue drugs for epilepsy being carried by the doctor.

Halhuber, MJ, et al. (1995) Does altitude cause exhaustion of the heart and circulatory system?..... in High Altitude Deterioration, Eds Rivolier, RJ et al. Karger, Basel, 192-202.

Peter Barry, UK
What is the general physician asking? There are many ways of looking at this question. Is the patient at risk of an exacerbation of one or more of his many problems if he goes on this trek? Quite clearly, he could develop an intercurrent gastrointestinal disturbance and become dehydrated, compromising his renal function and precipitating acute on chronic renal failure. He could stop absorbing or be unable to take his anti convulsants and have a seizure. Presumably hypoxia would lower his seizure threshold? Is there any evidence for this? Is there an effect per se of raised intercranial pressure and pre-existing epilepsy?

Should the patient tell the trekking company? Yes. The patient potentially endangers himself and his fellow travellers. These risks may be acceptable, but the participants should be able to make some sort of informed decision as to whether they take part. Should the physician tell the trekking company if the patient won't? This is more difficult. Can I just pose the question and then duck it? Should the doctor accompanying the trek have some previous experience or at least training in wilderness/high altitude medicine? Yes, and should the ISMM be laying down standards for medical cover for such treks. Personally I think not, but what do others think? There, more questions than answers, I am afraid, but as Brownie said, Hawaii looks like a much more attractive option, both from the patients point of view and that of the trekking company (at least he can drive down to sea level!).

Charles Houston, USA
The man with hypertension and chronic renal failure and epilepsy has three strikes against him and should not go to a remote place anywhere, least of all the Himalayas. Epilepsy is probably not affected by altitude, but the other problems pose too great a risk. No one should go on (or be accepted for) a trek to a remote altitude area without full disclosure of medical history. And in gneral a doctor for such a trip should have some understanding about high altitude.

David Murdoch, New Zealand
In many ways this is an issue of risk perception. Is the perceived risk associated with the proposed journey acceptable or not?

The person in question clearly perceives the risk to himself as acceptable, otherwise he would not be planning the journey. None of the medical conditions mentioned are absolute contraindications to remote high altitude travel (assuming he is not dialysis-dependent). Therefore, on an individual level, I would find it difficult to tell him to cancel his trip outright. I would, however, be very upfront with my concerns regarding maintenance of adequate hydration, the added risks of intercurrent illnesses on renal function and epilepsy control, the potential hazards to himself and others if he does become unwell, and the difficulties managing such problems in a wilderness setting.

This scenario is complicated by his intention to travel with an organised group. He now has some unwilling partners in his risk-taking. Consequently, the decision whether the perceived risk of travelling with this person is tolerable or not needs to be made at a group level (probably through the trekking company or expedition doctor). There is no doubt that he should disclose his medical history to the accompanying doctor and his general physician should encourage this. Many trekking companies would be very reluctant to take on this person despite the fact that many people with similar medical histories have safely undertaken such treks. However, it is well within their rights to do so.

This issue is complex and has few (if any) absolutes. If this man is determined to undertake the journey, perhaps the best we can do is to suggest he organise a trek with some willing acquaintances and a flexible itinerary, provide him with the best available information on the risks, and encourage him to get good medical

insurance!
Do we know the cause of the 45 year old's renal failure?

Tom Hornbein USA
Wouldn't touch him with a 10 foot pole. That he hasn't told the trek company is an early warning that he's bad news, putting the whole trek at risk. If he wants to hire a guide on his own, that's his business, and risks are obviously greater for him than others, but risk is what the game's all about anyway.

Simon Gibbs (UK)
The patient is irresponsible if he has misled the tour company. The fluid shifts encountered on the trek may lead to loss of control of his hypertension and epilepsy and destabilisation of his renal failure. I would like more clinical details before I strongly advised against the trek but his medical conditions do not bode well. I am sure he is a good example of why the morbidity of trekking with a tour company has become significant.

Gustavo Zubieta (Sr.) Bolivia
With this kind of disease, I do not recommend that he goes trekking. I would not recommend that anyone go to the top of Mount Everest, unless he wants to demonstrate how a human being can tolerate an environment. If such is the case then I would say, go ahead at your own risk.

Gustavo Zubieta (Jr.) Bolivia
Definitely not recommended. One thing is a pleasure trip (that often has complications, even for healthy people) and another an absolute necessity. Here in La Paz (3100-4100 m) we have people coming or living with all kinds of disease, but they have no other choice (work, family ties, home, etc). Furthermore, this is also a city with all kinds of medical knowledge and facilities, if necessary.

This question, brings to my mind a story of a man that went trekking and fell into deep coma. He was evacuated by helicopter, and ambulance-plane and when he recovered at his home hospital asked: "Why did you bring me back?. It was my choice to die there."

Gerald Dubowitz (Pheriche, Nepal)
Easy, don't go.

Worsening of renal associated problems are a problem in this environment which may upset his "stable" position.The epilepesy is not a contrainciation to mountain travel per se especially if well controlled.
The remoteness is perhaps more of a worry than the high altitude trekking. I would suggest a less remote trek, a good travel insurance policy and a suggestion to consider alternative venues/pursuits (skydiving?).

Andy Pollard, UK
Even with the limited medical information we have here, it is clear that this individual is at risk of serious complications of his chronic illness during a remote trek. If he is fully informed about the potential dangers and the difficulties in managing complications (because of the absence of immediate medical facilities) he

should be free to make his own descision about taking such risks. The real problem here is the effect that this man's chronic illnesses are likely to have on his companions who may be inconvenienced and even put in danger should he require evacuation on medical grounds. Should he develop problems during the trek, there could be legal implications for his own physician, the trek doctor or even the trekking company if he is not carefully advised. If he remains adamant that he wants to go he should be persuaded not to go with a commercial trek but to make private arrangements and to ensure that he has adequate insurance for evacuation.

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