

CASE REPORT

Inappropriate Dexamethasone Use by a Trekker in Nepal: A Case Report

Nicholas R. Haslam, BMBCh, BA; Rachel Garth, MBChB; Nicola Kelly, BMBCh, BA

From Barts and The London School of Anaesthesia, Barts Health NHS Trust, London, United Kingdom (Dr Haslam); the North Cumbria GP Training Scheme and Global Health Fellowship, Cumberland Infirmary, Carlisle, United Kingdom (Dr Garth); the North Bristol NHS Trust, Southmead Hospital, Bristol, United Kingdom (Dr Kelly); and the International Porter Protection Group, United Kingdom (Drs Haslam, Garth, and Kelly).

We present a case of inappropriate dexamethasone use in a trekker in the Everest region of Nepal. We aim to increase awareness among health professionals of the possible use of this medication by trekkers and promote knowledge of potential complications. In this case, a previously altitude-naïve trekker was prescribed prophylactic dexamethasone by physicians in a Western travel clinic before high-altitude trekking in Nepal. There were no indications for prophylactic medication nor for the use of dexamethasone. The trekker reported that no discussion regarding risks and benefits, alternatives, side effects, contraindications, or dose tapering on completion of the course had occurred before travel. Side effects were temporary, but serious complications may have ensued if it not for timely interventions by doctors at the International Porter Protection Group rescue post. The events leading to inappropriate dexamethasone use in this case cannot be known for certain. However, it is clear that the trekker lacked the knowledge to use the medication safely. Although the efficacy of dexamethasone in the prevention of acute mountain sickness is undisputed, associated side effects and other limitations make acetazolamide the prophylactic drug of choice. Inappropriate use of dexamethasone can lead to severe complications, and such a case has been reported from Mount Everest. Clinicians prescribing dexamethasone must understand the indications and risks, and health professionals at altitude should be aware of its use by trekkers and the potential complications.

Keywords: dexamethasone, altitude, drugs, prophylactic, medication, illness

Introduction

High-altitude environments are increasingly easy to access; as a result, travel to these regions has markedly increased.¹ In the case of Nepal, the number of tourists visiting for the purpose of trekking or mountaineering has surpassed 100,000 per year in recent years.² The risk of developing high-altitude illness (HAI) is implicit in such travel, and prevention is a priority. Although the most effective strategy is a gradual ascent rate,^{3,4} an increasing number of climbers and trekkers are using pharmaceuticals.⁵ The role of prophylactic medication in this setting has been described in a number of guidelines, and although ethical debate remains^{6,7} the position of acetazolamide as the first-line agent is clearly defined.⁸⁻¹⁰ As such, with the exception of a few

uncommon circumstances such as intolerance or allergy, acetazolamide is the drug of choice for those who decide to use medication to reduce the risk of developing acute mountain sickness (AMS).

The practical role of dexamethasone as a prophylactic agent is less clear. Although demonstrated to be of benefit in the prevention of AMS,^{11,12} associated side effects and risks limit its use to a few special situations.^{8,9} Inappropriate use is particularly high risk, and a case report concerning a climber on Mount Everest highlights the plethora of complications that can ensue.¹³

High-altitude mountaineering is a high-risk activity¹⁴ that has a longstanding relationship with prophylactic medications and performance-enhancing drugs.⁶ Climbers are often at the extremes of their physiologic reserve, and the gains from medications can be significant. Trekking, on the other hand, is a far less dangerous activity.¹⁵ Therefore, any risk associated with using these medications comprises a far higher proportion of the overall risk of the trip. In addition,

Corresponding author: Dr Nick Haslam, Flat 128a, Richmond Road, E8 3HW, London, UK; e-mail: nicholashaslam@nhs.net.

Submitted for publication March 2017.

Accepted for publication June 2017.

the benefits from these medications are often minimal and are not required to complete the trek if adequate ascent profiles are followed.

We describe a case of potentially dangerous dexamethasone use in a trekker who presented to the International Porter Protection Group (IPPG) rescue post in the Gokyo Valley of the Khumbu region, Nepal, in 2016. The case highlights the potential pitfalls of prescribing dexamethasone as a prophylactic medication. We aim to increase awareness among health professionals of the possible use of this medication among trekkers and to promote knowledge of its potential complications.

Case

During the 2016 premonsoon trekking season, a fit and healthy 54-year-old Western man visited the IPPG rescue post at Gokyo (4750 m). He was on his first sojourn to high altitude. Prompted by a discussion with a fellow trekker, he attended the IPPG post with concerns regarding his HAI prophylactic medication. Before travel, he attended a travel clinic in his home country. During this consultation, he inquired about prophylaxis for altitude sickness, and the physician prescribed dexamethasone. The patient reported that during the consultation there was no discussion regarding risks and benefits, potential alternatives, side effects, contraindications, or dose tapering on completion of the course. He also assumed he was taking the same medication as his trekking companion—acetazolamide (Diamox). As per instructions from his physician, he started taking dexamethasone on arrival in Kathmandu, considering dexamethasone to be identical to his friend's Diamox.

The patient flew from Kathmandu to Lukla airport to start his trek. When he reached the IPPG rescue post, he had been trekking for 16 days and had been taking dexamethasone for 18 days (2 mg twice a day for 9 days and a further 9 days of 4 mg twice a day). He planned to stop the drug with no tapering of dose at approximately 3500 m on his descent to Lukla airport—a 21-day course of dexamethasone having been completed at that point. The patient had no drug allergies or intolerances nor any other contraindications to acetazolamide. His ascent profile during the trek was consistent with current guidelines.⁸

The patient described very poor sleep since arrival in Kathmandu—going to sleep at 7 PM and waking at 10 PM every night with no further periods of sleep. When asked whether he felt this was unusual, he stated that he thought this was “weird but due to altitude.” He stated that he felt “great” with “lots of energy” and “no fatigue” compared with his fellow travellers. He described “elated mood” and put this down to the “excitement of traveling in Nepal.”

The patient also reported 2 episodes of syncope. The first occurred ascending Kalar Patar (circa 5600 m) alone at 4 AM in the morning because he could not sleep. On this occasion, his only preceding symptom was mild dizziness before finding himself lying on the ground. He reported a loss of consciousness and subsequent head injury sustained on falling; an abrasion was still visible over his left forehead. The patient recovered orientation rapidly after regaining consciousness and was helped to his feet by passers-by. Despite this episode, he continued climbing for 30 minutes more before deciding he felt strange and descending. A second, similar episode of syncope occurred while ascending Gokyo Ri (5357 m). He had no history of syncope or presyncope. Follow-up in his home country revealed no underlying pathology, and he has had no further episodes to date.

Physical examination at 4800 m was normal (heart rate, 76 beats/min; blood pressure, 118/80 mm Hg; respiratory rate, 16 breaths/min; peripheral arterial haemoglobin oxygen saturations, 87% on room air [acceptable at 4800 m]; temperature, 36.8°C; blood glucose, 4.4 mmol/L), and no peripheral stigmata of steroid toxicity were identified.

We discussed altitude illness, prevention of altitude sickness, and the role of dexamethasone in the mountains with the patient. Because the patient had been on dexamethasone for >14 days, he was provided with a dose-tapering protocol, a 7-day course of ranitidine and additional dexamethasone tablets in the event of an Addisonian crisis on withdrawal of the medication. We also strongly advised him not to travel alone and to discuss the situation with his accompanying friend in case of complications. He has since had no problems, and clinical evaluation by a physician on return to his home country was normal.

Discussion

This single case study describes unsafe dexamethasone use by a trekker in Nepal. Although unsafe dexamethasone use has been described on Mount Everest,¹³ we are not aware of any previous published examples in high-altitude trekkers. Whether this case report represents an isolated case or a developing phenomenon is unclear. Concerns that medication use among mountaineers is increasing¹⁶ have not been supported by recent studies,^{17,18} and no such studies have been carried out in high-altitude trekkers.

Clinicians should be cautious for a number of reasons when considering dexamethasone as an HAI prophylactic medication in trekkers. First, compared with acetazolamide, dexamethasone is a more complicated medication to use safely due to risks associated with

Download English Version:

<https://daneshyari.com/en/article/8558017>

Download Persian Version:

<https://daneshyari.com/article/8558017>

[Daneshyari.com](https://daneshyari.com)