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Acetazolamide Use in Ultrarunners at Altitude: Issues with Doping

To the Editor:

There has been a recent trend of participating in ultramarathons—multiday staged race events all over the world. The Himalayas are no exception. The number of trail races/ultramarathons that are run in the Himalayas has increased over the years. Running these kinds of races at an altitude susceptible to altitude illness poses a challenge both to the athlete and the treating physician. Most of the participants are amateur runners. Nevertheless, occasionally professional athletes are there to try it out, to help in training, or just to enjoy a fun way to visit the Himalayas while doing something they love: running.

Recently, I was fortunate enough to be a race doctor for 2 such races, Manaslu Trail Race 2015 and Badwater Mustang Trail Race 2016, both multistage trail running events in the Himalayas at altitudes climbing up to 5160 m. In these races, some athletes did take acetazolamide as prophylaxis for altitude illness, whereas some had to be treated after developing symptoms.

During these races I was asked as the race doctor to advise the athletes on taking acetazolamide for prophylaxis for altitude sickness. A few of them had competed in international tournaments and were concerned that acetazolamide was on the prohibited list by the World Anti-Doping Agency (WADA).¹ They also pointed out cases of a few prominent personalities who had been fined or punished for doping when they used acetazolamide to counter altitude sickness. As the drug can easily be bought over the counter, not everyone using it will have a doctor's prescription. The lack of prescription can make it easy to miss as a prohibited drug. Education is critical to avoid unknowing contravention of rules. Those who cannot use acetazolamide should acclimatize with a gradual graded ascent profile. However, acetazolamide has also been shown to be an effective drug for prophylaxis.² The drug is on the WADA list of

prohibited drugs for both in and out of competition and is classified under the diuretics and masking agents category.¹

Acetazolamide accounted for 2% of the positive diuretic findings in 2015.³ Most athletes who were punished did not have a therapeutic use exemption (TUE) completed before taking the drug. This is something doctors working in such scenarios need to be aware of.⁴

Doctors should explain the risk of using acetazolamide to the client and ensure that persons active in international competitions that fall under WADA submit a TUE form before taking the drug (or, in case of emergencies in which athletes are treated for altitude sickness with acetazolamide, get a retroactive TUE).⁴

Knowledge about the drug, its prohibition in sport, and the right protocol to follow when its use is required for valid reasons needs to be disseminated to preclude further mishaps and keep the sport clean. It is imperative to educate athletes, trainers, and doctors alike on altitude illness and acetazolamide use.

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Mismanagement of Severe Altitude Illness in a Tertiary Hospital in Nepal: A Cautionary Tale

To the Editor:

High altitude pulmonary edema (HAPE) is a potentially lethal noncardiogenic pulmonary edema¹ that accounts for the majority of deaths from high-altitude illness.² The availability of health care facilities at high