



Frostbites Following Mountaineering Sport in Iranian Athletes

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Dear Editor-in-Chief

Climbing and mountaineering are popular high altitude activities these days (1). Iran is a vast country that includes the Zagros and Alborz mountains. One of the complications of mountaineering is cold damage. Cold exposure can put athletes at risk of hypothermia, frostbite and non-freezing cold injuries. These injuries can vary from person to person based on exposure time, temperature and individual characteristics, such as physiological responses to environmental factors, underlying disease and the ability to adapt to colds (2).

The most common form of cold injury is frostbite (3). Mountaineers are one of major groups at risk of exposure to this kind of injuries.

We aimed to investigate the prevalence of frostbites in mountaineers from all over Iran, and for this purpose, we used the method of sending a checklist (designed by Google Docs) and accompany of one member of research team in the process of completing the form.

In this cross sectional study, 110 athletes were included during 2015-2016 from registered athletes of mountaineering federation of Islamic republic of Iran (MFIRI), using simple random sampling method. They were examined for any complications after frostbite injuries and their medical records were reviewed.

Study approval was provided by the Ethics Committee of Iran University of Medical Sciences (Ethics code: 96-01-30-29856), and all the patients were signed an informed consent before participating in the study.

A total of 110 mountaineers were interviewed and 23 mountaineers reported a high-altitude frostbite incident. The mean age of the mountaineers that had a frostbite incidence was 37.95 ± 8.76 yr old. The climbing gloves had significant difference between two groups.

According to results, hands and feet were the most involved organs respectively. Another study also has shown the two most involved organs with frostbite are hands and feet (4). Therefore, in preventive actions there should be a special attention to these regions. Moreover, climbing gloves have a significant effect on frostbite prevention. Using proper mittens and boots can make a significant decrease in incidence of frostbite. Mittens are more difficult to use but they are better than gloves in order to protect against cold because mittens decrease the surface area that is exposed to cold. Since nowadays there is a lot of focus on protecting feet from hypothermia and cold, there is a widespread use of mountaineering boots (5).



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Conflict of interest

The authors declare that there is no conflict of interest.

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