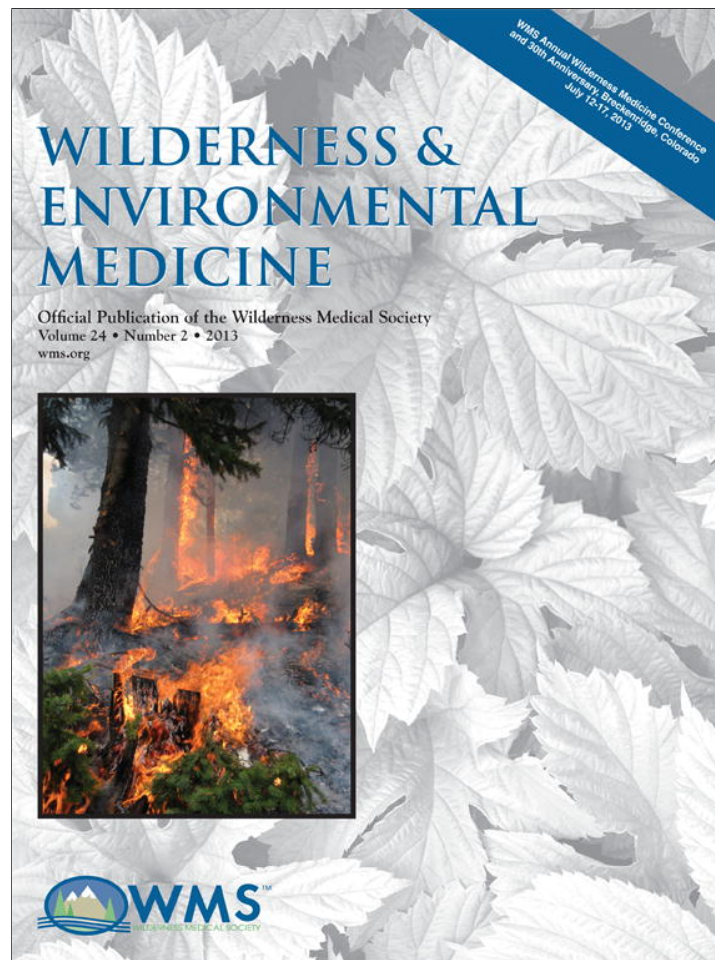


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Letters to the Editor

Injuries at the Iranian Championship in Indoor Rock Climbing

To the Editor:

The popularity of indoor climbing has increased as a recreational activity and competitive event in many countries. International competitions have been held in Iran, including the Fajr Master Cup competition 2012, the Asian Youth Championship 2001, and the Asian Youth Climbing Sports Championship 2012. With the increasing popularity of this sport, it is likely that more climbers will be consulting physicians with climbing-related injuries.¹ Many researchers have demonstrated minor injury risks for indoor climbing in comparison with other sports.^{2–4}

The aim of this study was to evaluate the risk of injury at a high-end Iranian indoor rock climbing competition to analyze injury patterns and to suggest means to prevent injuries.

Methods

One of us (S.A.H.) served as an assistant on the medical team at the 2010 Open National Rock Climbing Championships in Iran. All of the reported injuries were recorded in the medical injury form of the International Federation of Sport Climbing Medical Commission (2009),⁵ and 2 questions were added concerning preexisting injuries while climbing or falling. Preexisting injuries and overuse problems that had previously been treated were not included.

An injury was defined as any physical complaint sustained by a participant during climbing. This included ascent and descent of the climb.⁶ To compare this study with other sports, the injury risk was calculated per 1000 hours of participation in the championship, and the time of climbing performance (climbing time) per each climber included warm-up and cooldown. Performance time was considered 2 hours, which is according to the Union Internationale des Associations d'Alpinisme (UIAA) Medicine Commission standards.⁶

Descriptive statistics were applied to report the injuries.

Results

There were 220 male rock climbers from 26 provinces of Iran who took part in 3 disciplines of lead climbing ($n = 134$), speed climbing ($n = 50$), and bouldering ($n = 100$). Some of the climbers participated in 2 disciplines.

Climbing grade of lead climbing was 8.66 Metric Scale (semifinals) and 9.33 Metric Scale (finals).⁶ Twenty-eight climbers reached the semifinal. Climbing grade of bouldering competitions were in the range of 8 to 9.33 Metric Scale. Twenty climbers participated in the finals of bouldering competitions. The overall climbing time was 332 competition days, equaling 664 hours.

Fifteen acute medical problems occurred during the lead climbing ($n = 5$) and bouldering ($n = 10$) championships. There were no injuries in speed climbing. Fifty-three percent of injuries were as a result of falling ($n = 8$). Twenty percent ($n = 3$) were serious injuries that prevented the participant from continuing the contest and required transport to the hospital (elbow fracture [$n = 2$] and shin capillary fracture [$n = 1$]). Lower back muscle strains occurred during particular boulder problems ($n = 4$). Strains of deltoid muscles ($n = 2$) occurred while attempting to reach a hold. One wrist sprain occurred during a fall onto an outstretched hand during the bouldering championship. One ankle sprain occurred during a lead fall. One nosebleed, nail fracture, and skin bruise occurred, which were attributed to contact with the wall or rope (Table).

All injured climbers sustained only 1 injury, and the risk was calculated as 22.59 injuries per 1000 hours.

Discussion

This study was aimed at examining the injury risk of high-end Iranian rock climbers to analyze injury patterns and suggest means to prevent injury. Our calculated injury risk of 22.59 per 1000 hours is a higher risk than the findings of Schoffl and Kupper,² Backe et al.,³ and Schoffel et al.⁴

In accordance with the rule of the International Climbing Council, based on the medical statement of the Medical Commission of the UIAA, the bouldering competition area should be fully covered by mattresses. They must be fixed firmly and close to each other without space between them.⁷ Increased safety in lead climbing is achieved with the presence of 1 belayer and 1 backup belayer, plus a third person supporting the climber on the lower part of the climb. Therefore the risk of a ground-fall injury is minimized.

There were no injuries in speed climbing, likely because top ropes were used.

The results of our study suggest certain recommendations to minimize injury risk for indoor climbers. The number of belayers should be based on the rules of the

Table. Injuries at the Iranian National Championships in rock climbing

<i>Part of body</i>	<i>Injury</i>	<i>No</i>	<i>Discipline</i>	<i>Injury occurring on</i>
Head and face				
Nose	Nosebleed	2	Lead, bouldering	Falling (contact with rope), falling
Upper limb				
Shoulder (deltoid)	Strain	2	Lead, bouldering	Climbing, climbing
Elbow	Fracture	2	Lead, bouldering	Falling, falling
Wrist	Sprain	1	Bouldering	Falling
Finger	Nail fracture	1	Bouldering	Climbing
Trunk				
Lower back	Strain	4	Bouldering	Climbing
Scapula	Skin bruise	1	Lead	Falling
Lower limb				
Shin	Capillary fracture	1	Bouldering	Falling
Ankle	Sprain	1	Lead	Falling

UIAA. Locations should be designated for warming up and should include appropriate equipment to achieve this goal. Proper belaying technique can help prevent injuries by preventing climbers from striking the wall. Emphasis on fall training and ankle stabilization trainings are already part of the normal training routine in some countries and may improve safety.

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Accidental Poisoning by Death Cap Mushrooms: Be Careful What You Eat

To the Editor:

We present the case of a 58-year-old woman who presented to a major emergency department in Canberra, Australia, with an 8-hour history of acute-onset diarrhea and vomiting. She had arrived to Australia from China 1 day previously. On presentation she was afebrile and normotensive with a normal clinical examination. Her initial hematology and biochemistry results were unremarkable (Table), as was her electrocardiogram.

The patient confessed that she had ingested 6 mushrooms from her daughter's front garden at 1 o'clock the previous afternoon. She had boiled the mushrooms before eating them, and no one else at home had consumed them. At 10 o'clock that evening she developed acute onset of watery diarrhea and nonbilious vomiting. Her daughter was asked to return home and bring back a sample of the mushrooms she had consumed. Subsequent consultation with a local mycologist confirmed the mushroom was *Amanita phalloides* (Figure).

Treatment was initiated with silibinin 5 mg/kg intravenously 4 times a day, as well as high-dose benzylpenicillin (1,000,000 IU · kg⁻¹ · day⁻¹) and *N*-acetylcysteine as per the Australian guidelines for hepatoprotection in paracetamol overdose. She was aggressively resuscitated with fluids to replace her gastrointestinal losses.

Forty-eight hours after admission the patient developed decompensated coagulopathic liver failure (Table) and became acutely encephalopathic. She also required renal replacement therapy. She was transferred to the intensive care unit at the Royal Prince Alfred Hospital in Sydney, a quaternary critical care unit with both liver and