

MUSCLE AND TENDON INJURIES IN ALPINE SKIING: A SURVEY DURING THE WINTER SEASON 2003-04.

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Introduction

The aim of this study was to analyze retrospectively the case history of injuries during alpine skiing which have been observed in our ambulatories in the 2003-2004 winter season, with particular reference to the muscle and tendon injuries.

Methods

We have collected data from patients injured while skiing during December 2003 and March 2004. However, the type of accidents which have been observed were only minor traumas (ambulatory structure) not major ones. We collected data regarding age, sex, mechanism of lesion, anatomical location, type of injury, pre-existing injuries.

Results

Out of a total of 54 injuries we observed 15 muscular lesions (28%), 9 tendinopathy (16%), 15 knee sprains (28%), 8 regarding the spine (15%), 4 regarding the upper arm (7.5%), 2 ankle sprains (3.5%), 1 slight head trauma (2%). While analyzing muscular-tendon injuries, we observed: 8 muscular strains (2 adductor, 5 gastrocnemius, 1 pectoralis major); 4 contractures (3 popliteus, 1 gastrocnemius) and 3 ruptures to gastrocnemius. We observed also 9 cases of acute tendonopathy (4 patellar tendon; 2 quadriceps tendon; 1 supraspinatus, 1 peroneus and 1 tibialis anterior).

Discussion

The data of the present study showed a relative frequency in alpine skiing of muscular tendon injuries (in case histories including major trauma they rise up to 6%).

Most muscular injuries concerned the calf area and in particular the gastrocnemius medially, which was more often involved in both minor (strain) and major injuries (ruptures). Most patients were not athletes involved in competitive activity, and most injured themselves during the first or the last slope: this suggested that less trained, cold, or tired muscles are more easily subjected to injuries. Moreover, patients with poor muscular mass or precedent knee injuries have shown painful contractures of the popliteus muscle, the cause of which could be found in the protective role of this muscle towards the knee joint unprepared for the alpine skiing activity. The etiology of tendonopathy has been of both traumatic and overload type. More frequent forms regarded the anterior knee compartment, stressed by heavy repetitive solicitations during skiing.

In our data, muscular traumas happened especially in poorly trained subjects, while tendonopathy are observed in both poorly trained people and athletes who practiced skiing at competitive level.

Conclusions

We would like to stress that a proper physical training is fundamental to practice skiing, not only in order to prevent important ligament injuries, but also to avoid minor muscular-tendon injuries which may, in some cases, jeopardize the skiing activity in the long term.
