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Stress injuries to bone in college athletes: a retrospective review of experience at a single institution.

Arendt E, Agel J, **Heikes C**, Griffiths H.

Department of Orthopedics, University of Minnesota, Minneapolis, Minnesota 55455, USA

BACKGROUND: No comprehensive studies have been published on stress injuries to bone in college athletes.

PURPOSE: To review, in a college athlete population, the epidemiologic aspects of stress injuries to bone, and to examine a subset of patients who were treated with a uniform protocol for return to activities, with magnetic resonance imaging as the primary tool for diagnosis.

STUDY TYPE: Retrospective review.

METHODS: Ten years of medical records from a Division I college institution were reviewed. Location and grade of stress injury to bone and duration of disability were recorded. All injured athletes followed the same treatment program, with the exception of football players, who were excluded from the return to sport analyses.

RESULTS: Seventy-four athletes had lower extremity symptoms consistent with stress injury to bone. Diagnosis was confirmed in 68 of these athletes, 61 via magnetic resonance imaging, 6 via positive radiographs only, and 1 via bone scan only. Distance runners accounted for the most stress injuries to bone for both men and women. The tibia (37%) was the most frequently involved bone; however, as an anatomic region, the foot (44%) was the site of the most stress injuries. There was a significant correlation between grade of injury and time to full return to activity.

CONCLUSIONS: The grading system used at this institution is a standardized tool that can be used to predict time to return to sport. A standardized rehabilitation protocol allowed for an appropriate plan to return the athletes to pain-free competition.



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