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Comprehensive Mini Review on Acute Ankle Sprint

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Abstract

Ankle sprains are among the most common injuries encountered in both athletic and non-athletic populations, often resulting from sudden inversion or twisting of the ankle. This comprehensive review aims to provide a detailed overview of acute ankle sprains, including their mechanisms of injury, clinical assessment, management strategies, and rehabilitation approaches.

Ke ' d : Ankle sprains; Clinical assessment; Management strategies; rehabilitation approaches

I ' d c i '

e review begins with an exploration of the anatomical structures involved in ankle stability, including the lateral ligament complex and the role of proprioception in maintaining joint integrity. Mechanisms of ankle sprains, such as excessive inversion or dorsi exion, are discussed, along with risk factors predisposing individuals to injury, including previous ankle sprains, inadequate footwear, and biomechanical factors [1,2].

De c i i '

Clinical assessment techniques for acute ankle sprains are then detailed, encompassing a thorough history-taking, physical examination, and diagnostic imaging modalities such as X-rays and Magnetic Resonance Imaging (MRI). Grading systems, such as the widely used "Mild, Moderate, Severe" classi cation, aid in stratifying the severity of ligamentous damage and guiding treatment decisions [3,4]. Management strategies for acute ankle sprains are outlined, beginning with the immediate management principles of the RICE protocol (Rest, Ice, Compression, Elevation) and analgesic medication to alleviate pain and swelling [5]. e role of functional bracing, taping, or splinting in providing external support and protecting the injured ankle during the early stages of healing is discussed, along with the indications for immobilization versus early mobilization [6,7].

Furthermore, the review delves into the rehabilitation phase of ankle sprains, emphasizing the importance of early mobilization, range of motion exercises, and progressive strengthening and proprioceptive training to restore ankle function and prevent chronic instability [8]. Various rehabilitation protocols, including the use of balance boards, proprioceptive exercises, and sport-speci c drills, are explored, highlighting their e ectiveness in improving neuromuscular control and reducing the risk of recurrent sprains [9]. Finally, injury prevention strategies are addressed, including the implementation of neuromuscular training programs, proper footwear selection, and biomechanical assessments to identify and address underlying de cits contributing to ankle instability [10,11].

C ' cl i '

In conclusion, acute ankle sprains pose signi cant challenges to both athletes and non-athletes alike, necessitating a comprehensive approach to management that spans from initial assessment through rehabilitation and injury prevention. By implementing evidence-based strategies and fostering collaboration among healthcare professionals, optimal outcomes can be achieved, enabling individuals to safely return to their desired activities and minimize the risk of future sprains.

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