

Peripheral Nerve Injuries in Sports-Related Surgery: Presentation, Evaluation & Management

Content

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Peripheral nerve injuries during sports-related operative interventions are rare complications, but the associated morbidity can be substantial. Early diagnosis, efficient and effective evaluation, and appropriate management are crucial to maximizing the prognosis, and a clear and structured algorithm is therefore required. We describe the surgical conditions and interventions that are commonly associated with intraoperative peripheral nerve injuries. In addition, we review the common postoperative presentations of patients with these injuries as well as the anatomic structures that are directly injured or associated with these injuries during the operation. Some examples of peripheral nerve injuries incurred during sports-related surgery include ulnar nerve injury during ulnar collateral ligament reconstruction of the elbow and elbow arthroscopy, median nerve injury during ulnar collateral ligament reconstruction of the elbow, axillary nerve injury during Bankart repair and the Bristow transfer, and peroneal nerve injury during posterolateral corner reconstruction of the knee and arthroscopic lateral meniscal repair. We also detail the clinical and radiographic evaluation of these patients, including the utility and timing of radiographs, magnetic resonance imaging (MRI), ultrasonography, electromyography (EMG), and nonoperative or operative management. The diagnosis, evaluation, and management of peripheral nerve injuries incurred during sports-related surgical interventions are critical to minimizing patient morbidity and maximizing postoperative function. Although these injuries occur during a variety of procedures, common themes exist regarding evaluation techniques and treatment algorithms. Nonoperative treatment includes physical therapy and medical management. Operative treatments include neurolysis, transposition, neurorrhaphy, nerve transfer, and tendon transfer. This article provides orthopaedic surgeons with a simplified, literature-based algorithm for evaluation and management of peripheral nerve injuries associated with sports-related operative procedures.

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