Glenohumeral joint preservation: current options for managing articular cartilage lesions in young, active patients.

Abstract: This is a review of joint-preservation techniques for the shoulder. Whereas the management of diffuse articular cartilage loss in the glenohumeral joints of elderly and less active patients by total shoulder arthroplasty is well accepted, significant controversy persists in selecting and refining successful operative techniques to repair symptomatic glenohumeral cartilage lesions in the shoulders of young, active patients. The principal causes of focal and diffuse articular cartilage damage in the glenohumeral joint, including previous surgery, trauma, acute or recurrent dislocation, osteonecrosis, infection, chondrolysis, osteochondritis dissecans, inflammatory arthritides, rotator cuff arthropathy, and osteoarthritis, are discussed. Focal cartilage lesions of the glenohumeral joint are often difficult to diagnose and require a refined and focused physical examination as well as carefully selected imaging studies. This review offers a concise guide to surgical decision making and up-to-date summaries of the current techniques available to treat both focal chondral defects and more massive structural osteochondral defects. These techniques include microfracture, osteoarticular transplantation (OATS [Osteochondral Autograft Transfer System]; Arthrex, Naples, FL), autologous chondrocyte implantation, bulk allograft reconstruction, and biologic resurfacing. As new approaches to glenohumeral cartilage
repair and shoulder joint preservation evolve, there continues to be a heightened need for collaborative research and well-designed outcomes analysis to facilitate successful patient care.