

Acute Versus Delayed MRI Imaging and Associated Pathology in Traumatic Shoulder Dislocations

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Objectives: Delayed management of patients with shoulder instability may increase the prevalence and severity of concomitant intra-articular shoulder injuries resulting from persistent instability. We hypothesize that patients with a longer delay from an initial dislocation event to MRI demonstrate a greater degree of intra-articular shoulder damage.

Methods: We performed a retrospective review of 89 patients from a single institution with clinically and radiographically confirmed traumatic, anterior, primary shoulder dislocations. Patients were divided into two groups: those undergoing MRI less than (N=44; LT6) or greater than (N=45; GT6) 6 months from the initial dislocation event. MRI assessment included evaluation of the severity of cartilage damage and bone loss, in addition to the presence of soft-tissue injuries to the labrum, capsule and rotator cuff. Subsequent treatment including type and method of surgical intervention, as well as recurrent postoperative instability, were evaluated.

Results: The delayed MRI group demonstrated a greater degree of pathology compared to the early imaging group. A higher percentage of SLAP tears (58% vs. 34%), posterior labral tears (22% vs. 7%) and cartilage damage (73% vs. 27%) were present in the GT6 versus LT6 group. There was no difference in anterior glenoid bone loss. For those patients who underwent surgical stabilization for symptomatic instability, there was a statistically significant difference in recurrence of instability between the early MRI group (0/21) than that of the delayed MRI group (6/33 or 18%).

Conclusion: Patients who undergo MRI greater than 6 months from the time of primary shoulder dislocation demonstrate a greater incidence and severity of intra-articular pathology including SLAP tears, posterior labral tears and anterior glenoid cartilage damage. Recurrent instability is significantly higher after shoulder stabilization surgery when performed more than 6 months from the primary dislocation event.

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