

Classification of Superior Labral Tears by Etiology

Eoghan T Hurley, Jay Micael Levin¹, Emily K. Reinke², Samuel G Lorentz, Alex Michael Meyer³, Bryan Crook, Jack Twomey-Kozak⁴, Grant Hayden Cabell, Dean C Taylor⁵

¹Duke Health, ²Duke University Sports Medicine, ³Duke University Hospital System, ⁴Department of Orthopaedic Surgery, Duke University, ⁵Duke University

INTRODUCTION:

The purpose of this study was to classify those with superior labral tears by their etiology, to compare their presentations and associated pathologies.

METHODS:

A retrospective review of those who underwent an MRI at our institution over 1 year period was conducted. Patients were included if they had a superior labral tear identified, were between 18-65, and had not had a prior surgery. Patients' superior labral tears were classified based on whether their presenting etiology was as a result of trauma, overuse, or degenerative without inciting event. Traumatic and overuse superior labral tears were further classified as acute or chronic, based on whether they presented within 6 weeks of symptom onset. Patient history, demographics and MRI findings were recorded and compared, with a p-value < 0.05 considered to be statistically significant.

RESULTS:

A total of 129 patients were included (50 were traumatic; 10 of which were due to a dislocation, 28 were overuse, and 51 were degenerative), and the mean age of patients was 51, with those having degenerative tears being significantly older ($p = 0.02$), but there was no significant difference between the age of those with traumatic vs. overuse tears ($p = 0.87$). Those with overuse superior labral tears were significantly more likely to present acutely (82% vs. 56% with traumatic injuries, $p = 0.03$). There was no significant difference in gender, BMI, or history of smoking ($p > 0.05$ for all). There was a significant difference in the rate of those presenting with an associated rotator cuff tear (traumatic: 60%, overuse: 32%, degenerative: 69%, $p = 0.007$). Furthermore, there were significantly higher rates of acromioclavicular joint arthropathy in those with degenerative tears ($p = 0.02$), but no difference in the incidence of biceps tendinosis between the groups ($p = 0.59$).

DISCUSSION AND CONCLUSION:

Patients with different etiologies for their superior labral tears have significant differences in their demographics and MRI findings. These differences may have implications in their prognosis and could play a role in determining the optimal treatment of their superior labral tear.