

Outcomes and Complications of Bony Bankart Repair in the Adolescent Population

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INTRODUCTION: Outcomes following operative management of bony Bankart lesions haven't been compared to outcomes of isolated soft-tissue Bankart lesion repairs, particularly in the adolescent population at high risk for recurrent instability. The presence of bony Bankart (BB) lesions in adolescent patients undergoing arthroscopic stabilization for anterior shoulder instability will significantly impact re-injury rates, revision surgeries, and return-to-sport outcomes compared to patients with no bony Bankart (NBB).

METHODS: Adolescent patients undergoing arthroscopic stabilization (2010-2023) with a minimum of 2-years follow-up were categorized into BB and NBB cohorts based on MRI and intra-operative findings. Premorbid glenoid diameter was estimated using a best-fit-circle technique. Data collected included demographics, injury details, surgical techniques, and surgical outcomes. Patient-reported outcomes (PROs) were assessed using Single Assessment Numeric Evaluation (SANE), Pediatric/Adolescent Shoulder Survey (PASS), and quick Disabilities of the Arm Shoulder and Hand (qDASH) scores.

RESULTS: Twenty-five patients with BB (age: 16.9 ± 0.9 years) were identified and age matched to a cohort of 25 patients with NBB (16.6 ± 1.0 years) ($p=0.32$), with an overall mean follow-up of 4.2 years. BB was associated with males ($p=0.02$) and collision mechanisms of injury ($p=0.02$). BB required more suture anchors (6.0 ± 1.2 versus 4.9 ± 1.4) ($p=0.005$). Premorbid glenoid diameter was larger in the BB (29.9 ± 2.6 mm versus 26.2 ± 2.3 mm) ($p<0.001$). Mean sagittal width of the BB fragment measured 5.7 ± 1.5 mm (range 3-10 mm) and represented a mean glenoid bone loss of $18.9\% \pm 4.5\%$. Surgery failure rates (32% BB versus 32% NBB), revision surgery rates (12% BB versus 4% NBB), and return to sport rates (88% BB versus 80% NBB) were not significantly different. SANE scores were higher with BB (91.2 ± 9.9 versus 85.2 ± 12.8) ($p=0.03$), yet no differences were found in PASS and qDASH outcomes.

DISCUSSION AND CONCLUSION: BB was associated with larger glenoid diameters, male sex, and collision injuries, but outcomes did not appear to vary when compared to NBB shoulders. The hypothesis was refuted with BB shoulders having a higher SANE score and no other reduction in outcomes. Recurrent instability and revision surgery rates remain high in this youthful population regardless of the presence of a bony Bankart or not.