Effectiveness of ultrasound-guided cyst aspiration and injection of corticosteroid for the treatment of superior glenoid paralabral ganglion cysts

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INTRODUCTION: Paralabral ganglion cysts can be a source of significant chronic shoulder pain. Treatment of paralabral cysts in the past was open excision of the cyst, but with the advancement of arthroscopic techniques, management is typically arthroscopic. Surgical management of the cyst with decompression and labral repair have been shown to have excellent results. Equally effective outcome has been reported with isolated labral repair without cyst excision, debridement, or decompression. Advancements in musculoskeletal ultrasound has presented the treatment option of ultrasound guided needle aspiration of shoulder ganglion cyst. The reports of combined aspiration and corticosteroid injection for paralabral cysts are limited. The goal of this study was to evaluate the effectiveness of ultrasound-guided cyst aspiration and injection of corticosteroid for the treatment of superior glenoid paralabral ganglion cysts.

METHODS: A retrospective analysis of 97 consecutive patients who underwent ultrasound-guided aspiration and corticosteroid injection for superior glenoid paralabral cysts was performed. Using either a linear 5-12 MHz transducer or a curved-linear array 3-5MHz transducer ultrasound, a real-time aspiration of the paralabral cyst was performed under sonographic guidance. A solution containing ~2ml of Bupivacaine 0.5% and 1 ml (40-80mg) of Methylprednisolone acetate was then injected into the cyst cavity and the needle was removed. Primary outcome was successful resolution of symptoms and normal shoulder exam. Failure was defined as no resolution of symptoms that lead to further physical therapy, subsequent injection, or surgical intervention.

RESULTS: Data for 92 patients were available after a mean follow-up of 21 months (range, 6 to 72 months). Successful outcome was reported in 71 patients (77%) with complete resolution of their symptoms at final follow-up. 17 patients (18%) had surgery at a mean of 8 months after injection. The remaining four patients experienced recurrence of their symptoms after the first injection and had a subsequent injection that led to complete resolution of symptoms.

DISCUSSION AND CONCLUSION: Ultrasound-guided aspiration and corticosteroid injection is a safe and effective treatment for symptomatic superior glenoid paralabral cysts with 77% of patients experiencing resolution of symptoms and normal shoulder exam. This approach can be successfully used as a first line of treatment for those patients that wish to avoid surgery.

Figure I. Ultrasound visualization and aspiration of superior glenoid paralabral ganglion cyst. **A.** Arrow points to cyst, asterisk represents humeral head **B.** Arrow points to 20g spinal needle aspirating cyst.

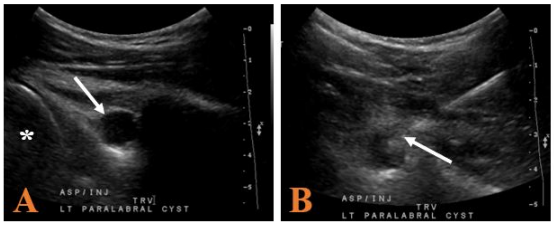

Figure II. Left shoulder MRI (**A.** Coronal, **B.** Axial), arrow points to superior paralabral cyst.