

## Clinical and Radiographic Analysis of Failed Bristow-Latarjet Procedures for Recurrent Shoulder Instability

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### Summary:

This retrospective case series illustrates the specific graft- and hardware-related problems that may be encountered in the treatment of recurrent instability after Bristow-Latarjet procedures.

### Abstract:

#### INTRODUCTION

Procedures involving transfer of the coracoid process to the anterior glenoid neck (i.e. Bristow or Latarjet procedures) exhibit significantly lower recurrence rates compared to soft-tissue procedures in the treatment of anterior shoulder instability. (Mizuno et al., 2014, Griesser et al., 2013) However, if recurrence does occur, graft- and hardware-related issues, the loss of anatomical landmarks, scarring and displaced neurovascular structures may complicate the revision procedure. (Young and Rockwood, 1991) This retrospective case series analyzes the clinical and radiographic findings after failed Bristow-Latarjet procedures and their surgical treatment.

#### METHODS

Eighteen patients who underwent open revision surgery for recurrent instability were retrospectively reviewed. In all cases the index stabilizing procedure consisted of a Bristow-Latarjet for recurrent instability with important bone loss. Patient files, operative notes and medical images were analyzed by an independent observer after approval of the Ethical Review Board.

#### RESULTS

The cases included 12 men and 6 women with a mean age of 26.1 years ( $\pm$  6.1, range: 18-29). Sixty-one percent were contact-athletes, 50% were active smokers. Average time between index and revision surgery was 49.5 months ( $\pm$  64.4, range: 1-244). Instability recurred after a new major traumatic event in 33%. A complete anterior dislocation occurred in 6 cases, anterior subluxation in 11 cases and posterior subluxation in 1. All patients showed positive apprehension and apprehension-relocation tests. Imaging revealed an intact graft in 38%, a fractured graft in 22% and a resorbed graft in 50%. The graft was malpositioned in 4 cases (2 too high, 2 excessively lateral). Screws were broken in 39% and loose in 11%. Graft pseudarthrosis was observed in 60%, with secondary glenoid cyst formation in 16%. The sling of the conjoined tendon was intact and preserved in all cases. Fifteen patients were treated with a tricortical iliac crest autograft. Three patients underwent repositioning of the original coracoid graft (1 to a more medial and 2 to a lower position) with additional cancellous bone grafting.

#### CONCLUSION

When recurrent instability occurs after Bristow-Latarjet procedures, specific graft- and hardware-related problems may complicate further treatment. At the time of revision, the sling of the conjoined tendon is usually intact, but

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graft fracture or resorption are often encountered and routinely necessitate the use of tricortical iliac autografts to address bone loss.