Minimum 2-year Outcomes after Resection Arthroplasty of the Sternoclavicular Joint

J. Christoph Katthagen MD, Dimitri S. Talal MSc, Travis J. Menge MD, Marilee P. Horan MPH, Peter J. Millett MD, MSc
Center for Outcomes-based Orthopaedic Research at the Steadman Philippon Research Institute, Vail, Colorado, USA

Financial research support not directly related to this study was received by the Institute from the following: Arthrex, Osuris, Siemens, Smith & Nephew

INTRODUCTION

There have been limited studies reporting outcomes of SC joint resection for symptomatic, stable degenerative joint disease with varying amounts of medial clavicle resection, ranging from 1-4 cm³. Recent anatomic and biomechanical studies have suggested that minimizing bony resection may be advantageous for preservation of ligamentous joint stabilizers. The purpose of this study was to assess functional outcomes and return to sport following resection arthroplasty for osteoarthritis (OA) of the sternoclavicular joint, with a maximum resection of 10 mm.

METHODS

This was an IRB-approved study. Between 1/2006 & 11/2013 on consecutive patients:

- SC resection for SC OA (Figure 1)
- Inclusion criteria
  - Successful period of non-operative management with nonsteroidal anti-inflammatory medication and physical therapy of at least 3 months
  - Exclusion criteria
    - Instability of the SC joint requiring additional stability
    - Infectious cause of SC joint OA
    - Outcomes were assessed with ASES, QuickDASH, SF-12 PCS, SANE, VAS and other pain measures, patient satisfaction and sport level measures

RESULTS

- 17 SC joints in 16 patients (9 female, 7 male) met inclusion criteria
- Mean age at time of surgery was 41 years (range 12-66)
- 1 patient refused participation in the study. 3 SC joint resections (17.7%) required SC joint revision surgery
- Minimum 2-year outcomes data were available for 11 of the remaining 13 SC joints (84.6%)
- The mean time to follow-up was 3.3 years (range 2.0-8.8)
- Several pain scores, the QuickDASH score and the ability to sleep on the affected shoulder showed significant improvement postoperatively (p<0.05; Tables 1, 2)
- The level of sports participation, as well as strength and endurance when participating in sport significantly increased postoperatively (p<0.05, Table 3)

CONCLUSIONS

- Resection arthroplasty of the medial end of the clavicle in patients with OA of the SC joint without instability results:
  - Pain reduction,
  - Functional improvement
  - High rate of return to sport at mid-term follow-up.

REFERENCES