Systematic Follow-up after Supraclavicular First Rib Resection for Thoracic Outlet Syndrome using Quick DASH and Cervical Brachial Symptom Questionnaire pre- and postoperatively

Claudia Bauer, Reinhold Stober
Kantonsspital Olten, Switzerland

Objective: In a previous retrospective review we provided data on long term patient satisfaction after supraclavicular first rib resection for Thoracic Outlet Syndrome (TOS) by postoperative assessment using the Quick DASH questionnaire (mean score 21 after mean follow-up of 11 years in 87 patients). Objective of the current prospective study is to systematically evaluate the outcome after supraclavicular first rib resection for TOS using Quick DASH and Cervical Brachial Symptom Questionnaire (CBSQ) pre- and postoperatively.

Method: All consecutive patients scheduled for supraclavicular first rib resection for TOS (technique shown in figure A) were assessed pre- and postoperatively (3-24 months after operation) by Quick DASH and CBSQ (Cervical Brachial Symptom Questionnaire).

Results: 30 consecutive patients are included by now. Of 19 cases pre- and postoperative questionnaires are available by now. Mean Quick DASH score before operation was 66 (0-100), mean CBSQ score 90 (0-120). During mean follow-up of 8 months (range 3-24 months) Quick DASH score dropped from 66 to 30, CBSQ score from 90 to 29 indicating significant improvement after supraclavicular first rib resection (fig. B). Poorer scores are associated with multiple operations, opioid use, coincidence of chronic pain syndromes and posttraumatic onset. All but one patient (frozen shoulder, patient no 4) would do the operation again. Patients report an average of 76% improvement after operation (fig. B). Fig. C shows detailed CBSQ scores of the 19 patients/operated sides (twice bilateral). Self assessed improvement in % is presented in fig. D.

Conclusion: Supraclavicular first rib resection can offer consistently good results with high patient satisfaction in carefully selected patients. Most pronounced improvement occurs in the first 3 to 6 months after supraclavicular first rib resection for TOS and stabilizes over time. Quick DASH and CBSQ yield valuable instruments in evaluating the outcome. The CBSQ, developed by Jordan et al., is most specific for neck, arm and shoulder impairment, especially in the context of TOS. Patients’ self assessment of improvement seems to correlate quite well with the scores of Quick DASH and especially CBSQ.