Kantonsspital St.Gallen

Revision rate after screw or plate arthrodesis of the glenohumeral joint

Gabor Puskas,A Lädermann,S Hirsiger,P Hoffmeyer & C Gerber

INTRODUCTION
Glenohumeral arthrodesis is a rare salvage procedure for selected patients with different shoulder pathologies. Among a variety of surgical techniques, compression screws or plate fixation are most widely used. Minimally invasive screw fixation has become more popular, although it has been shown to be biomechanically inferior to plate arthrodesis.

HYPOTHESIS
Screw arthrodesis would lead to a higher revision rate than plate arthrodesis.

MATERIAL AND METHODS
Twenty-seven plate and 7 screw arthrodesis of the glenohumeral joint in 19 male and 15 female patients of a mean age of 50years (range, 16-85years) were reviewed in a retrospective multicenter study with at a follow-up of 43months (range, 11-152months) to compare their clinical and radiographic outcome with special focus on revision rate.

RESULTS
Constant score did not change, but its subscore for pain significantly improved from 4.5 points (range, 0-15 points) to 11 points (range, 6-15 points). The subjective shoulder value increased significantly from 19% (range, 0-70%) to 41% (range, 10-80%) and 81% of the patients were satisfied. In 14 patients (41%), the arthrodesis had to be revised either for non-union (11) or malunion (3) at a mean of 12months (range, 0-47months). The 2 groups did not differ in terms of demographic data, nor of preoperative and postoperative clinical data. There were more revisions after screw than plate fixation. If revision was performed for non-union, this difference was significant.

DISCUSSION/CONCLUSION
In selected patients, glenohumeral arthrodesis can significantly reduce pain and achieve at best a reasonable function and subjective satisfaction rate. Revision rates favor plate over isolated screw fixation.

LEVEL OF EVIDENCE

Kantonsspital St.Gallen

IV retrospective series.

type	journal paper/review (English)
date of publishing	29-06-2017
journal title	Orthop Traumatol Surg Res (103/6)
ISSN electronic	1877-0568
pages	875-884