RETROSPECTIVE MULTICENTRE STUDY OF 90 CASES OF REVERSED SHOULDER PROSTHESIS COMPARING THREE DIFFERENT TYPES OF IMPLANT

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Abstract

Introduction: 90 cases of reversed prosthesis have been evaluated and the aim of the retrospective multicenter study was to correlate the functional and radiological results depending on the type of implant.

Material & Methods: 90 patients have been operated (67 eccentric omarthrosis, 5 centered omarthrosis, 7 massive rotator cuff tear, 11 others), by 8 surgeons in 3 centers by a delto-pectoral approach (71%), and evaluated retrospectively by an independant surgeon. 3 types of prosthesis have been implanted: 1st generation of reversed prosthesis (Aequalis-Reversed, Tornier®: humeral neck angle of 155°), BioRSA (humeral neck angle of 155° but with lateralization of center of rotation, Tornier®), and a prosthesis with a more vertical angle of 145° (Humelock-Reversed, FX-Solutions®. A prospective study of the QuickDash score, Constant score and analysis of clinical and radiological complications by the surgeon and an independant surgeon at the time of longest follow up is reported.

Results: 76/90 patients have been reviewed with a mean follow up of 18,4 months (15,6% loss of FU). The mean Constant score of the series reached 55,1 (78,2 with ponderation). In this series 59,2% of radiological complications (35,5% of notch) and 14,5% of clinical

complications were reported. Mobility and functional scores were not different depending on the type of implant but were significantly better in the group of prostheses implanted after 2012 than before 2010.

Only one significant difference has been noted: in the subgroup of implants with a more vertical humeral angle (Humelock-Reversed, FX-Solutions® 145°) there was no notching at FU (versus 57% in the 2 other groups).

Discussion: Learning curve and technical modifications on each implant allows improved results of each published series of reversed prosthesis. Even if each notch is not followed in each patient by diminution of functional results, each surgeon has to offer to his own patient the lower risk to develop a notch.

Conclusion: Following the current concept the best way to decrease the notch in reversed prosthesis seems to combine an inferior tilt, a low implantation of metaglene, and a more vertical humeral angle.