How to decrease scapula notching?
Retrospective multicenter study on 90 reversed prosthesis with analyse of gleno metaphyseal angle

L Obert, E Jardin, F. Loisel, A Adam, J Uhring, Gallinet, S Rochet, T Lascar

The aim of the retrospective multicenter study was to correlate the functional results with the gleno metaphyseal angle. 90 patients have been operated (67 eccentric arthroplasty, 5 centered arthroplasty, 7 massive rotator cuff tear, 11 others), by 8 surgeons (3 centers), by deltopectoral approach (71%), and evaluated retrospectively by an independent surgeon. 3 types of prosthesis have been implanted: (Aequalis-Reversed, Tornier®: humeral neck angle of 155°), BioRSA (humeral neck angle of 155° and a prosthesis with a more vertical angle of 145° (Humelock-Reversed, FX-Solutions®). Analysis of QuickDash score, Constant score and complications have been reported by an independent surgeon.

Results: 76/90 patients have been reviewed with mean FU of 18.4 months. When Gleno metaphyseal angle was between 35° and 45°, QDash (25.6) and Constant scores (CB=59-CP=85.2%) were significantly better. Clinical complications reached only 6.25%. Quantity of notch were significantly lower and in the subgroup of 145° prosthesis, FX (p=0.024) or when the angle was between 35° and 45°. The percentage of radiological complications is 50% (80% of notch) in the 32 reported series. Lower is the angle, lower is the risk of notch. In order to decrease the value of the gleno metaphyseal angle, the surgeon can give an inferior tilt but he can play on the humerus part in using a more vertical inclination than the vast majority of the reversed implant on the market. With this work we demonstrated the value of the angle was significantly correlated with the risk of notch.