

Short-term results of reverse shoulder prosthesis according to pathology

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Abstract: The aim of this study was to analyze short-term functional results and complications in reverse shoulder prosthesis, and to determine if these are influenced by the different shoulder conditions.

Materials and Methods : Between 2018 and 2020 we inserted 18 reverse shoulder prostheses. Indications were: arthropathy by rupture of the rotator cuff, glenohumeral osteoarthritis, proximal humerus fracture . We evaluated the patients from medical and radiographic points of view and analyzed them classified into different groups.

Date of Submission: 28-02-2022

Date of Acceptance: 10-03-2022



Figure 1 : Preoperative X-ray showing stage 3 in Hamada's Classification of right shoulder in a 65-year old female with arthropathy by insufficiency of the rotator cuff



Figure 2 :postoperative X-ray showing reverse shoulder prosthesis in the right shoulder.

I. Results :

The average follow-up was of 14 month(10-18) and the average age was 73.5 years old (57-90). The Constant score improved from 17.7 to 63.1 on average ($p<0.001$) and the ASES score, from 13.4 to 66.8 on average ($p<0.001$).

Elevation increased from 75.5° to 111.5° ($p<0.001$). There was not significant improvement in internal and external rotat 12 patients(66.6%) reported great satisfaction/satisfaction. In 4 patients (22.3%) we found notches on the lower rim of the glenoid cavity. The complications rate was of 16%, and complications were only in the fracture groups.

And the only complication observed was the periprosthetic fracture.

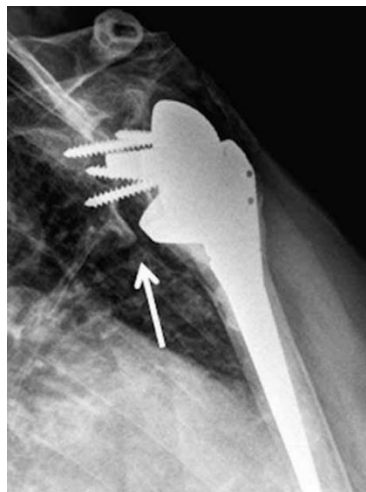


Figure 3 : 12 months follow-up X-ray showing notching with no signs of prosthetic loosening in a 75-year old female with arthropathy by insufficiency of the rotator cuff treated with

II. Discussion

Most series showed very good short-term results with reverse shoulder prosthesis.

At analyzing the functional results of reverse shoulder prostheses in proximal humerus fractures, most studies describe an anterior elevation of approximately 95° to 145° , external rotation of 0° to 25° and a 50-to-65 Constant score.^{6,32-34} In a series of 30 patients who received a reverse shoulder prosthesis for 3- and 4-fragment fractures, with a minimal two-year follow-up, they found an average anterior flexion of 139° , external rotation of 27° and an ASES score of 78.3.³² In a similar study carried out in 27 patients, also with a minimal two-year follow-up, the authors reported an anterior flexion of 112° , abduction of 97° , external rotation of 12.7° and a Constant score of 55.6.reverse shoulder prosthesis.

the percentages of complications in the fracture groups are similar to those published in previous series. 6,25-28,32-34 On the contrary, complication rates in the osteoarthritis groups (0%)were lower than those reviously published.20,21.

III. Conclusion :

Reverse shoulder prostheses improve signiDcantly functional scores, anterior flexion and abduction, independently of surgical indications; however, it has limitations with respect to postoperative external and internal rotation. It is a valid alternative in multiple shoulder conditions; nevertheless, complication rates are high; therefore, indications have to be precise, especially in patients who will be treated because of fracture .

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Oufaska Kamal, et. al. "Short-term results of reverse shoulder prosthesis according to pathology." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 21(03), 2022, pp. 15-18.