

ONE OR THREE-WEEKS IMMOBILIZATION PERIOD IN PROXIMAL HUMERAL FRACTURES CONSERVATIVELY TREATED. PROSPECTIVE RANDOMIZED STUDY.

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Keywords: Shoulder, Immobilization, Fracture

Background

In proximal humeral fractures that are treated conservatively there is no consensus with regards to the optimal time period for immobilization.

Objectives

The objective of this study was to determine whether there are functional differences or differences in pain in proximal humerus fractures that are treated conservatively with immobilization during three weeks compared to those that are treated conservatively with immobilization during one week.

Study Design & Methods

Prospective randomized study in which 146 consecutive patients who presented a fracture in the proximal humerus concordant with conservative treatment were included, with a clinical follow-up of at least one year. The patients were assigned randomly to group 1 (immobilization time period of one week) or to group 2 (immobilization time period of three weeks). The patients in group 1 started with auto-rehabilitation exercises after the first week, whereas the patients in group 2 started the exercises after the third week. The functional status was evaluated using the Constant score at 3, 6 and 12 months and the pain levels were evaluated using a VAS after one week, 3 weeks, 3 months, 6 months and one year.

Results

Of the 146 patients that were included, 35 were not followed up. Finally, 111 patients were analysed, 49 belonging to group 1 and 62 to group 2, with an average age of 70.58 years old (SD 11.10). No significant differences were observed between both groups with regards to the VAS evaluation after one week (group-1 5.92 and group-2 5.61; p 0.65), 3 weeks (group-1 4.81 and group-2 4.13; p 0.60), 3 months (group-1 1.97 and group-2 2.34; p 0.37), 6 months (group-1 1.04 and group-2 1.3; p 0.60) and one year (group-1 0.65 and group-2 0.67; p 0.72). Likewise, no functional differences were found using the SST test after 3 months (p 0.78), 6 months (p 0.76) nor a year (p 0.93); nor using the functional Constant score after 3 months (p 0.66), 6 months (p 0.35) and one year (p 0.92), nor in any of the subscales during the evaluation period. As for complications, they were observed in 5.41% of the sample: 3 cases of avascular necrosis of the proximal humerus (two patients belonging to group 1 and one to group 2); 2 cases of pseudoarthrosis (both in group 2) and one case of secondary displacement of the fracture which was observed in the radiological control after week one (belonging to group 1), which required surgical intervention.

Conclusions

The immobilization of proximal humerus fractures that are treated conservatively can be reduced to one week, as no significant differences were found with regards to pain nor to functionality of the patients, whether they are immobilized for one week or for three.