

## **Is it Necessary to do a One-Week X-Ray Control in Acute Proximal Humeral Fractures Conservatively Treated? Prospective Randomized Multicentric Study**

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### **INTRODUCTION:**

Conservatively treated proximal humeral fractures (PHF) are often X-ray reevaluated after one week to detect further displacements of the fracture that may require surgery.

The objective of this study is to evaluate the need for one-week X-ray evaluation of PHF conservatively treated.

### **METHODS:**

Prospective randomized multicentric study involving 4 centers. PHF conservatively treated were eligible if met inclusion criteria (patients over 18 and below 85 yo., less than 3 weeks after fracture, no previous pathology of the affected shoulder). Exclusion criteria included dementia and the impossibility of carrying out a program of rehabilitation. Patients were randomized to group I (with one-week X-Ray assessment) and to group II (without X-ray assessment). Pain was assessed with the aid of a VAS at one- and three-weeks, at 3-, 6-months. Constant Score and SST was recorded at 6- and 12-months. Complications were recorded in both groups as were the patients in group II that for whatever reason required one-week X-ray exam. The power of the study was set for 90 patients. Analysis was done as per intention-to-treat.

### **RESULTS:**

One-hundred-forty-three patients were included. There were no significant differences between both groups according to age, gender, dominance, and type of fracture according to Neer's classification system. No statistically significant differences were noted between both groups in VAS at 1-, 3-weeks, 3-, 6-months (6.04 GI vs. 6.09 GII, p.914, 4.49 GI vs. 4.07 GII p.351, 2.69 GI vs. 2.16 GII, p.229, 2.11 GI vs. 1.7 GII p.353), Constant Score at 6-, and 12-months (63.6 GI vs. 64.2 GII p.871, 70.7 GI vs. 70.8 GII p.892) and SST at 6-, 12-months (8.4 GI vs. 8.3 GII p.864, 11.4 GI vs. 9.3 GII p.319). One patient in group I required surgery at 10-months of follow up because of avascular necrosis. No other patient in both groups required further surgery nor change of the treatment regime. There were 10 complications (5 on each group) corresponding to stiffness and avascular necrosis.

### **DISCUSSION AND CONCLUSION:**

According to the results of this study, one-week control X-Ray is not necessary in proximal humeral fractures conservatively treated.