

0439

**Title: The effect of early occupational therapy consultation on complications of immobilization after pin fixation in Colles' fracture.**

hamidreza soleymani moghaddam, Ali hosseyni

*University of Social Welfare and Rehabilitation, Tehran, Iran, Islamic Republic of*

**Objective:** The aim of this study was to determine the impact of early Occupational therapy consultation and intervention on complications of immobilization after pin fixation in Colles' fracture.

**Method:** This study was an experimental clinical trial design through patients with Colles' fracture who had been treated by pin fixation and casting in Akhtar Orthopedic hospital in Tehran. Patients were assigned to an experimental (n=16) and control group (n=16) by Stratified Randomization design (SR). All subjects between the age of 30 to 60 years in accordance with inclusion criteria were recruited in the survey. The participants in the experimental group underwent Occupational therapy consultation for home exercises in the immobilization period for 6 weeks, but the control group did not perform any home exercise and only took a medicine. Finally at the end of immobilization period, after cast and pin removal, both groups were evaluated through range of motion, pain, hand edema, grip strength and fine motor dexterity. the data were analyzed by the Chi- square test, T test, ANOVA and Mann-Whitney test.

**Results:** Our findings revealed that there were statistically ignificant differences between the two groups in finger ROM ( $p<0.001$ ), wrist flex ( $p=0.005$ ), wrist ext ( $p=0.026$ ), elbow ( $p=0.004$ ), shoulder ( $p<0.001$ ), hand pain ( $p=0.004$ ), edema ( $p=0.003$ ) and Purdue Pegboard test time ( $p=0.019$ ), but grip strength and wrist U.D and R.D ( $p=0.262$ ,  $p=0.158$ ) did not significantly differ between the two groups.

**Conclusion:** Based on the results of the research, we conclude that early Occupational therapy consultation in pin period lead to the maintenance of normal range of motion, reduction of hand pain and swelling, and enhancement of the dexterity of the hand, but had no influence on hand grip strength and wrist lateral movement.

**Keywords:** Occupational therapy - Colles' fracture - immobilization period- pin fixation.