ABSTRACT

COMPARATIVE STUDY OF CLINICAL FUNCTION OUTCOME, RADIOLOGY, AND RISK OF ULNAR NERVE INJURY BETWEEN CROSSED TECHNIQUE AND LATERAL TECHNIQUE FIXATION IN SUPRACONDYLER HUMERUS FRACTURE IN PEDIATRIC

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Introduction: Supracondylar humeral fractures are fractures that often occur in children. There are several fixation techniques pinning Supracondylar humeral fractures including cross-pinning and lateral-pinning techniques. This study aims to determine the differences in the results of functional clinical, radiological and risk of ulnar nerve injury from Supracondylar humeral fractures in children between cross-fixation techniques and lateral-fixation techniques.
Objective: Knowing the differences in clinical, radiological outcome and risk of ulnar nerve injury between crossed and lateral fixation technique.
Methods: This study was an observational analytical retrospective study by searching data on patients with supracondylar fractures in children after internal fixation measures at Dr. Soetomo Hospital then collected data about the results of clinical evaluations with Flynn criteria, radiologically with Skagg criteria and the presence or absence of ulnar nerve injury. Statistical tests between the two treatment groups using the Mann-Whitney test.
Results: The results showed 35 patients with 26 men (74.3%) and 9 women (25.7%), have an age range between 3 years old to 13 years old. With a total of 35 patients, 23 patients had cross-fixation and 12 with lateral-fixations. Based on Flynn's criteria, the cross-fixation group obtained Satisfactory results in 22 patients and Unsatisfactory results in 1 patient, the lateral-fixation group obtained Satisfactory results in all patients. Based on the Skagg criteria it was found that there was no shift in 18 patients, mild shifts in 4 patients and a major shift of 1 patient in the cross-fixation technique group. In the lateral-fixation group there were 8 patients without shifts, 4 patients with mild shifts and no patients with major shifts. In conclusion there was no difference in functional and radiological clinical outcomes between cross-fixation techniques and lateral fixation techniques.

Keywords: supracondylar humeral fracture, cross-pinning, lateral-pinning, Flynn criteria, Skagg criteria

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