**Comparison of Open reduction and internal fixation by Stabilization with cross K-wires in early versus late presentation of Supracondylar Humeral Fractures in Children**

Muhammad Zeb Khan1, Muhammad Abdul Basit2, Muhammad Shakeel3,

Muhammad Nauman Akram4, Mian Muhammad Hanif5

**ABSTRACT**

**Objective:** To compare open reduction and internal fixation by stabilization with cross k-wires in early (within 6 days of injury) versus late (2 to 4 weeks) presentation of supracondylar humeral fractures in children.

**Study Design:** A quasi experimental study

**Place and Duration:** Department of Orthopedic, Lahore General Hospital, Lahore from 1st January 2021 to 30th June 2021.

**Methodology:** A total of 42 cases (21 children in Group-A with early presentation and 21 in Group-B with late presentation) of Gartland’s type II and III humeral supracondylar fracture were included. All open reduction and internal fixation procedures were done by a single surgical team while post-surgical follow up consisted of 3-months. Functional and cosmetic outcome of surgery were observed in terms of decrease in carrying angle and elbow movements as per Flynn’s criteria.

**Results:** Out of a total of 42 cases, there were 71.4% male and 28.6% female.The mean age of children in Group-A was 8.29±1.85 years while it was 7.43±2.06 years in Group-B. Mean procedure time was noted to be 0.91±0.35 hours in Group-A and 1.38±0.25 hours in Group-B (p<0.001). All cases were found to have satisfactory wound condition and bony union. Decrease in range of motion of elbow as 0-50, 6-100,and 11-150 in 10, 9 and 2 cases in Group-A respectively in comparison to 4, 14 and 3 cases in Group-B respectively (p=0.145). Functional outcome in 33.3% cases was excellent, good in 54.8% and fair in 11.9% cases while there was no difference in between both study groups (p=0.145).

**Conclusion:** There is no significant difference in functional outcomes of early or late presentation in children undergoing open reduction and internal fixation for supracondylar fractures.

**Keywords:** Supracondylar fracture, Humerus, Children, Early presentation, Late presentation, Open reduction, Internal fixation, K-wire stablization, Functional outcome.

**How to Cite This:**

Khan MZ, Basit MA, Shakeel M, Akram MN, Hanif MM. Comparison of open reduction and internal fixation by stabilization with cross k-wires in early versus late presentation of supracondylar humeral fractures in children. Isra Med J. 2022; 14(2): 55-58.DOI: https://doi.org/10.55282/imj.oa1309

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.