

Comparison of outcomes of open and closed surgery in treatment of pediatric supracondylar fracture of humerus in Fatemi hospital of ardabil

Abstract

Background: About fracture treatment, there are different methods and there are disagreements among experts. One of the treatment methods is closed surgery and skin pinning and the other method is open surgery. Surgeons are more inclined to close the reduction, but there is still a concern about the outcomes and results of this reduction among surgeons. It should be noted that in types 3 and 4, which are associated with high displacement, closed surgery is very difficult and many scientific sources recommend open surgery.

Aim: To compare open and closed surgery in supracondylar humerus fracture with displacement in Fatemi hospital from April 2020 to April 2021.

Methods and material: Study environment was Fatemi Hospital of Ardabil University of Medical Sciences and the statistical population including all children with supracondylar humerus fractures whose fractures are displaced (types 3 and 4) in April 2020 It was 2021 until April. According to the total number of samples (75) extracted from HIS software, the sample size was determined assuming the size of the population and using Morgan formula. Finally, children with supracondylar humerus fractures were divided into two groups according to the type of open and closed surgery. Finally, 71 people were included in the study.

Results: A total of 71 patients were included in the study, of which 40 (56.3%) were boys and 31 (43.7%) were girls. Twenty-one patients (29.6%) were under 5 years old, 39 patients (54.9%) were between 5 and 10 years old and 11 patients (15.5%) were over 10 years old. Also, the mean age of patients was 7.52 years with a standard deviation of 3.78.

Conclusion: Comparing the results of closed and open surgery in the treatment of pediatric supracondylar fracture with transfer to Ardabil Fatemi Hospital, showed that the duration of surgery, duration of postoperative recovery, incidence of mal-union and complications during surgery in closed surgery was better than open surgery. Also, the incidence of union bread was not observed in patients with open surgery, which shows better results than closed surgery in these patients in terms of the incidence of this complication.

Keywords: Humerus supercondylar, closed surgery, open surgery