

How Much are Emergency Medicine Specialists' Decisions Reliable in the Diagnosis and Treatment of Pediatric Fractures?

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Abstract

BACKGROUND: Considering the importance of an early diagnosis and proper decision-making in regards to the treatment of pediatric distal radius and elbow fractures, this study examines emergency medicine specialists' accuracy in the diagnosis and treatment of these patients.

METHODS: From 2012 and 2013, children less than 14 years old who were referred to an academic hospital emergency department with elbow or distal radius fractures were enrolled. Initially, patients were examined by an emergency medicine specialist and then they were referred to an orthopedic surgeon. Type of fracture and the proposed treatment of two specialists were compared.

RESULTS: In total, there were 108 patients (54 patients in each group) with a mean age of 8.1 ± 3.3 years. Identical diagnosis in 48 cases (88.9%) of distal radius and 36 cases (66.7%) of elbow trauma were observed. We found a difference between diagnosis of the two specialists in diagnosing lateral condyle of the humerus fracture in the elbow group and growth plate fracture in the distal radius fracture group, but the differences were not significant. Among 108 patients, 70 patients (64.8%) received identical treatment.

CONCLUSION: Although the emergency medicine specialists responded similarly to the orthopedic specialists in the diagnosis of pediatric distal radius and elbow fractures, diagnosis of more complicated fractures such as lateral condylar humeral fractures, distal radius growth plate and for choosing the proper treatment option, merits further education.

KEYWORDS: Distal radius fracture; Elbow fracture; Emergency medicine; Orthopedics; Pediatrics

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