Variation Among Pediatric Hand Surgeons When Diagnosing and Treating Distal Radius Fractures

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INTRODUCTION

- Distal radius fractures are the most common injury in the pediatric and adolescent population.
- Literature reports poor agreement among pediatric orthopaedic surgeons when diagnosing and treating these fractures.
- **Purpose:** This study was to determine whether variation exists among pediatric hand surgeons when diagnosing and treating distal radius fractures.

RESULTS

- Fair agreement was present when diagnosing and classifying distal radius fractures as torus, greenstick, Salter-Harris II, and extra-physeal fractures (K = 0.312).
- (Table 1)
- There was slight agreement regarding the type of immobilization (K = .242) and length of immobilization (K = .187).
- Slight agreement was present regarding when the first follow-up visit should occur (K = .188). Fair agreement was present regarding whether or not new radiographs should be obtained at the first follow-up visit (K = .396), and if radiographs were necessary at the final follow-up visit (K = .368).
- Surgeons had slight agreement regarding the stability of the fracture (K = .139).

METHODS

- 10 hand surgeons reviewed 100 sets of posteroanterior and lateral pediatric wrist radiographs. (Figure 1)
- Surgeons completed a questionnaire describing the fractures, the type of treatment they would recommend and the recommended length of immobilization.
- Additionally, the surgeons were queried when the next follow-up visit would be scheduled for, and whether or not they would obtain new radiographs at the subsequent and final follow-up visits.
- Kappa statistics were performed. Strength of agreement was determined based on guidelines outlined by Landis and Koch.

CONCLUSIONS

- There is no standardization regarding how to treat and manage pediatric/adolescent distal radius fractures to ensure proper healing while minimizing the length of immobilization.
- Better classification schemes and treatment algorithms are needed for pediatric/adolescent distal radius fractures.