Variation Amongst Orthopedic Surgeons when Treating Pediatric Phalangeal Neck Fractures
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INTRODUCTION

• Phalangeal neck fractures are a common orthopedic injury seen predominantly in the pediatric population.
• The indications for operative treatment are currently evolving with some recent papers suggesting that these fractures can remodel.
• Purpose: To determine the variation among orthopedic surgeons in their practice habits when treating phalangeal neck fractures.

RESULTS

• Increasing Patient Age: For each advancing year of age, the surgeons are 13.8% more likely to treat the fracture surgically, which was determined to be a linear relationship (p<0.0001).
• Female Patients: Females were 38% more likely to be treated surgically (p<0.0006).
• Effect of Surgeon Gender: The data displayed a trend that indicates female surgeons are more likely to operate than their male counterparts.
• Pediatric-Specific Institutions: Surgeons were less likely to operate if they worked in a dedicated children’s hospital.
• Of the 300 images viewed, 32.7% of these were recommended for surgical intervention.
• The rate that each individual surgeon chose to operate ranged from 8.3% to 66.7%.

METHODS

• Sample Description: Twenty-five orthopedic surgeons reviewed sets of posteroanterior (PA), oblique, and lateral finger radiographs of children less than 17 years of age.
• Associated Clinical Vignettes: Clinical vignettes were provided with the radiographs to include the age and gender of the patient. Surgeons were provided with 12 sets of radiographs with clinical vignettes.
• Questions Assessed:
  1) Would you treat the fracture with immobilization or some sort of intervention?
  2) If operative intervention is chosen, would a CRPP or ORIF be performed?
  3) When would the next follow-up visit be if the fracture was nonoperatively treated.
• Additionally, surgeons were asked to complete a demographic questionnaire detailing their training and personal background.
• Statistics: The analysis was completed using a mixed effect model with the respondent as the random effect.

CONCLUSIONS

• There is no consensus or standardization for treatment of phalangeal neck fractures in the pediatric population.
• Age and gender are the primary patient characteristics in determining if a phalangeal neck fracture is surgically treated.
• In order to provide the best outcomes with the least patient morbidity, more standardized treatment algorithms are needed for pediatric phalangeal neck fractures.