

Session/Poster#

Presenter

B40

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The Yield of Subsequent Radiographs During Nonoperative Treatment of Radial Head and Neck Fractures

Introduction: Isolated fractures of the radial head are usually treated nonoperatively. To our knowledge, the only study that identified a notable rate of displacement of isolated radial head fractures (33%) was by Radin and Risborough in the 1960s. Recent literature suggests that serial radiographs may not be necessary after the initial diagnostic radiograph in nondisplaced or minimally displaced radial head or neck fractures (Mason type 1) without additional injury to the affected limb. In this study, we aimed to determine (1) how often subsequent radiographs were obtained after the initial diagnosis of a non- or minimally displaced radial head/neck fracture, and (2) if subsequent radiographs changed initial management protocol. We hypothesized that subsequent radiographs would not change initial management.

Methods: We identified 767 patients with nonoperative treatment for isolated Broberg and Morrey modified Mason type 1 or 2 fractures at a large urban hospital system during the years 2019 and 2022. Patient demographics, provider characteristics, and treatment details were obtained from a hospital database. Nonparametric bivariate analysis was performed, and a p-value < 0.05 was used to indicate statistical significance.

Results: Thirty-eight percent (n=292) of patients had subsequent radiographs. Twelve of the 292 patients that had subsequent radiographs (4.1%) were offered surgery but declined. None of the patients with subsequent radiographs had an alteration of their weight-bearing status. In bivariate analysis, patients with subsequent radiographs were significantly more likely to have subsequent radiographs.

Conclusions: Radiographs after diagnosis do not alter treatment of nondisplaced or minimally displaced radial head or neck fractures (Mason type 1) without additional injury to the affected limb. The decreased utility of subsequent radiographs highlights a potential focus for quality improvement and decreased health-resource utilization.