

Influence of Surgeon, Patient, and Radiographic Factors on Distal Radius Fracture Treatment

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Purpose: There is a trend to recommend operative treatment for distal radius fractures. The influences of surgeon and patient factors on recommendation for operative treatment are not well studied. The purpose of this study is to evaluate surgeon and patient factors influencing the recommendation for operative treatment in distal radius fractures.

Methods: In a web-based study, 252 orthopaedic surgeons from a variety of countries reviewed 30 consecutive sets of radiographs of patients that presented to our emergency department with a fracture of the distal radius. Surgeons were randomly assigned to receive either “radiographs only” or “radiographs and clinical information”. Surgeon and patient factors associated with a recommendation for operative treatment were sought in bivariate and multivariable analysis. Fleiss kappa was used to assess and compare the interobserver agreement.

Results: Surgery was recommended 52% of the time whether or not surgeons received clinical information. Female surgeons, surgeons with less than 21 years of experience, and hand and wrist surgeons were more likely to recommend operative treatment, but these factors explained only 1% of the variation in recommendation of operative treatment. Radiographic criteria (intra-articular fractures, ulnar styloid fractures, dorsal comminution, and dorsal tilt) explained 48% of the variation. The overall agreement on treatment was moderate, and was slightly, but significantly, higher among surgeons who received radiographs alone.

Conclusion: The observation that clinical information lowered agreement among surgeons, but did not influence treatment recommendations, suggests that additional study is merited to determine whether patient preferences and circumstances are adequately considered.

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an “off label” use). For full information, refer to page 600.