



Invited Commentary | Surgery

Do Patients Care What Their X-rays Look Like?

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Randomized clinical trials (RCTs) provide the highest-quality evidence with which to compare interventions. A key component of a good RCT is a high level of complete follow-up data; this requires extensive resources and takes up a major part of the budget in any RCT. While the comparison of the interventions is obviously the primary goal of the RCT, the high-quality follow-up data facilitates secondary analyses of these data—analyses that may not be possible using other, less complete data sets. Therefore, secondary analyses of RCT data have become an increasingly useful resource for investigating associations between variables and outcomes and for generating new hypotheses.

Chung et al¹ performed a secondary analysis of a multicenter RCT on treatment options for distal radius fractures. They assessed the association of radiographic parameters with patient-reported and objective functional outcome measures among 166 patients aged 60 years or older who completed 12-month assessments.¹ In keeping with other similar analyses of both older^{2,3} and younger⁴ patients, Chung et al¹ found little association of patients' radiographic measurements with their outcomes.

This is important because the rationale for intervening surgically is essentially based on the premise that restoring the patient's preinjury anatomy will provide better outcomes when the fracture heals. Of course, the increasing trend toward surgical intervention comes at a price: the surgery itself is expensive, and there is a risk of surgical complications, such as infection, nerve damage, or tendon damage. There is always a risk that a patient will be made worse by surgery.

If restoration of the anatomy does not affect patient outcomes, then why subject them to the risk and expense of surgery? Should we give up operating on patients with a fracture of the distal radius?

Not quite. All patients in the study by Chung et al¹ had a displaced fracture, but all had a surgical reduction of their fracture, ie, an attempt to restore preinjury anatomy, followed by surgical fixation. While some patients may not have had complete restoration of the anatomy, they all had an initial reduction of their fracture, which was considered acceptable by the surgeon. Therefore, the conclusions are only applicable within the range of radiographic outcomes deemed acceptable at the point of reduction, ie, greater deformities may have a stronger association with functional outcomes.⁵

The study by Chung et al¹ adds to the weight of evidence that suggests that surgeons should be less worried about the precise restoration of the patients' anatomy and more concerned about providing the quickest and lowest-risk option for returning patients to their preinjury level of function. Simple, low-cost interventions may turn out to be as good as or better than invasive surgical interventions.^{6,7} However, this study¹ does not indicate that we should stop trying to reduce the patient's fracture. If the fracture is badly displaced, putting the bone back where it came from is a good thing for relieving pain as well as for preventing longer-term disability.

Future studies should investigate the best ways to restore the overall anatomy of the patient as quickly and safely as possible. This applies equally to younger patients as to older patients. Surgeons should stop worrying so much about what the radiographs look like and concentrate on what patients think is important in their recovery from a fracture of the distal radius.

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