

Preop CT Scan for Distal Radius Fractures: Is it Really Necessary?

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Introduction

- Open reduction internal fixation is a popular method of fixation for distal radius fractures
- Current AAOS guidelines provide limited strength recommendations for the preoperative usage of CT in intra-articular fractures of the distal radius.
- Our study aim was to determine the value of these scans as it relates to the postoperative articular reduction



Methods

•Retrospective review of cases between May 2013 and December 2014.

•Inclusion criteria:

- Age > 18 years
- AO 23 C fracture
- Fixation with a volar plate.

•Additionally, only patients with a CT scan performed post-operatively were included in this review, in order to best evaluate the articular reduction.

•Exclusion criteria:

- Fragment specific fixation
- Classification besides AO/OTA type C

•Radiographic measurements were made on the postoperative CT scan, evaluating

- Articular gap
- Articular stepoff
- Radial inclination
- Volar tilt
- Sigmoid notch reduction

•Two groups were compared, those with a preoperative CT scan and those without a preoperative CT scan.

Table 1

	WITHOUT PREOP CT	WITH PREOP CT	P Value
Radial Inclination	19.7°	17.1°	0.058
Volar tilt	10.3°	10.4°	0.913
Stepoff	0.71mm	1.2mm	0.115
Gap	1.7mm	2.1mm	0.359

•66 fractures in 62 patients met all criteria for inclusion.

•The group without a preoperative CT scan (n=32) was not significantly different than the group with preoperative CR scan, (n=34) when comparing radiographic reduction.

•In the group without a preoperative CT scan, 3/32 had non-concentric sigmoid notch reduction, of those with a preoperative CT scan 1/32 had non-concentric sigmoid notch reduction.

Conclusion

- Several factors influence the decision whether to obtain a preoperative CT scan for distal radius fracture
- We were unable to demonstrate any improvement in reduction in the group with the preoperative CT scan

