

Nonunion of Nonsurgically Treated Nondisplaced Fracture of the Radial Neck

To the Editor:

It was great to see more data regarding radial neck nonunion with nonsurgical treatment of nondisplaced fractures. My understanding of it comes from the first case series I saw from Cobb and Beckenbaugh at the Mayo Clinic.¹ What was really interesting about their series of 5 fractures in 4 patients was that 2 of the nonunions healed, 1 of them a year after fracture, and none of them had elbow pain. I made a similar observation when I called back patients for our study on open reduction internal fixation of the radial head.² One person I saw 13 months after injury had a nonunion. When I had him back for a longer-term evaluation with radiographs 26 months after injury, the fracture was healed.

My mentor, Dr. Jesse Jupiter, had seen a few patients with radial neck nonunion after nonsurgical treatment of a undisplaced fracture of the radial head (3 fractures) or neck (2 fractures).³ He operated on 1 of the patients for a clicking sensation. When we reviewed the 5 patients, we noticed that the nonunions were discovered because radiographs of the elbow had been made for reasons incidental to the radial head fracture. Four of the 5 chose nonsurgical treatment and had no symptoms. One with nonunion on a radiograph made 13 months after injury had complete union on a radiograph taken 20 months after injury. The conclusion we made is that surgeons should be careful not to be alarmed at the nonunion because it may or may not be the cause of the symptoms and it is possible they will eventually heal. Given that these nonunions were discovered incidentally, it has always remained unclear how often nonunion occurs and goes undiagnosed. Given that there are few if any symptoms, we do not tend to repeat radiographs, and the fractures usually heal, so it is possible that it is fairly common that they may take more than a year to heal.

What is needed is a large series of patients with radiographs about 6 months after a nondisplaced radial neck fracture. My guess is that a notable percentage will have radiographic nonunion but limited symptoms.

That was my bias approaching the data of Golinvaux and colleagues.⁴ I have several questions for the authors. For many surgeons, non- or minimally displaced radial head fractures are never reimaged because radiographs will not influence treatment.^{5,6} Increasingly, people with common fractures that have a good prognosis are seen once with no return visit.⁵⁻⁷ So my questions are as follows: What percentage of the 472 radial neck fractures had an elbow radiograph more than 1 month after injury? What is your routine management of radial neck fractures? What were the specific circumstances of the 8 patients diagnosed with nonunion? How many months after injury were the radiographs documenting nonunion made? Why did you obtain radiographs at that time? Who made the decision for surgery?

My concern is whether there is ever an indication for surgery given that the natural history of radial neck nonunion after non- and minimally displaced fractures is union (sometimes years later) with no adverse consequences.

I thank the authors in advance for their contribution and I hope that together this collective data and its interpretation will benefit patients and the surgeons who care for them.

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