

## Surgery Case: Green Room

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A 77 year old woman fell at home and suffered a distal radius fracture of the left, non-dominant arm. She is otherwise generally healthy and lives at home. Her hobbies include shopping, doing crossword puzzles and going to the movies. She is an avid walker. X-rays at the time of injury reveal a mildly comminuted distal radius fracture with no articular step-off, 20 degrees of dorsal angulation, 12 degrees of radial inclination and 1mm of shortening. No attempt is made at a closed reduction; rather, the patient is treated with open reduction and internal fixation with a volar plate. The fracture heals uneventfully, but the patient complains of nagging but mild volar sided wrist and hand pain. She is diagnosed with flexor tenosynovitis and is managed with PT and then long-term NSAIDs.

*Why is this avoidable care?*

No attempt was made at closed reduction and casting to treat this fracture.

The generally accepted indications in young adults for treatment of DR fractures with an ORIF are: dorsal angulation of greater than 10 degrees, greater than 2mm of articular step-off or radial shortening, and radial inclination of 10 degrees or less. (Typically, a surgeon would attempt to attain this result with a closed manipulation and then move to open surgery if this could not be achieved.) However, indications in the elderly have never been studied, and surgical indications have slowly crept into elderly age groups. It should be noted that the surgical indications in young patients originated from the observation of early arthritis in high demand individuals (labourers, factory workers, high demand athletes) that developed malunions. The elderly, and this patient in particular, typically are not high demand individuals. A prospective study comparing ORIF with casting in the elderly was not done until this year (!), and it showed no difference in functional outcome (DASH and PRWE scores) or satisfaction between groups in displaced, unstable fractures such as the fracture described above. Furthermore, complications were 3x more likely in the surgery group with nearly a 20% need for a second surgery. Flexor tenosynovitis is a common complication – which this patient has – and she now requires regular NSAID use.

*Why has surgery become standard care?*

It makes the x-rays look better which is rewarding for the surgeon.

It's quite a bit more lucrative than conservative care.

The advent of new volar plates has made the surgery easier, and these plates are very heavily marketed to orthopedists. If one isn't using them frequently, one is behind the times, or so it's implied. They are 10 times more expensive than standard plates.

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Fracture surgery is an easy sell to patients. Everyone feels intuitively that things should be put back together correctly.

Surgery requires less office follow-up than conservative treatment where x-rays need to be checked frequently freeing the doc up to see new patients. Furthermore, both treatments are coded as packages – surgery or fracture package – which includes 90 days of office care. So, the frequent follow-ups for the conservative care yield no practice revenue.