

Intramedullary fixation of distal fibular fractures in a geriatric patient: A case report

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Intramedullary rod fixation is presented as a viable treatment option for distal fibular fractures in the geriatric population. This technique leads to a reduction in wound complications, hardware irritation, procedure time and need for subsequent surgeries as seen with traditional open reduction internal fixation for distal fibular fractures in higher-risk patients.

Keywords: ankle fracture, trauma, geriatric, open reduction

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Geriatric patients are at an increased risk for sustaining ankle fractures due to increased fall rate and decreased bone density. Surgical repair for such injuries is often complex, due to the standard large incision and relatively bulky fixation which is necessary in the geriatric patient due to their generally poor bone stock [1]. This traditional form of fixation carries a complication rate of up to 30% [2]. Additionally, wound healing complications and hardware irritation is more common in this population due to a poor soft tissue envelope, with wound infection rates ranging from 26-40% [3]. Commonly, subsequent surgeries are necessary to remove hardware or to perform wound debridements [4]. As it is well documented that surgical morbidity increases in this population, it is important to utilize techniques and fixation methods that limit subsequent encounters. In this case report, we present intramedullary fixation for distal fibular fractures as a viable option for the geriatric population.

Case Report

The patient is a 94-year-old male who presented 5 days after a fall with a Weber B, slightly comminuted, left distal fibular fracture (Figure 1a). Due to the unstable nature and slight displacement of the fracture, surgical intervention with an intramedullary fibular rod was chosen. Intra-operatively under general anesthesia, excellent anatomic reduction was noted after placement of the rod and one syndesmotic screw (Figure 1b).

At 2 weeks postoperatively, the posterior splint and skin staples were removed. The patient transitioned to protected heel touch weight-bearing for 4 weeks. He resumed regular activity and normal shoe wear at 6 weeks postoperatively. There were no wound healing complications or hardware irritation noted throughout the postoperative course. At 12 months follow up, patient reported no ankle pain or limitations in activities of daily living (Figures 2a-b).

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Figure 1 AP ankle radiograph showing Weber B fracture with slight comminution and displacement (a). Two weeks postoperative AP radiograph showing excellent anatomic reduction with fibular rod and syndesmosotic screw (b).

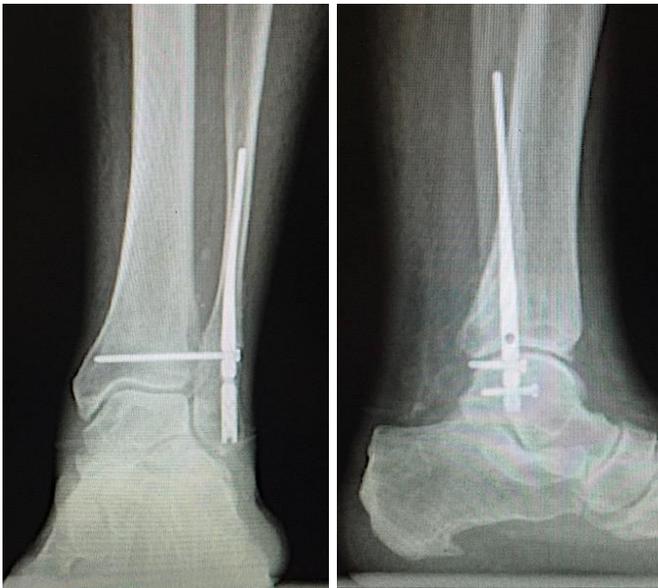


Figure 2 Twelve months post operative AP (a) and lateral (b) radiographs showing excellent bony consolidation of fracture fragments and adequate anatomic reduction.

Discussion

Treatment of distal fibular fractures in geriatric patients have an increased risk for postoperative complications which can lead to wound healing issues and subsequent surgeries. It is important to utilize techniques and fixation methods that limit subsequent encounters in order to decrease surgical morbidity in this cohort. The intramedullary fibular rod is an excellent alternative to traditional ORIF in the geriatric population. Our case example demonstrates an ideal patient for this technique, including successful anatomic realignment and uneventful postoperative course.

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