

Early Routine Radiographic Follow-up at 2-3 Weeks for Operatively Treated Tibia, Fibula or Ankle Fractures Does Not Contribute to Identification of Complications: A Two Center Case Series of 628 Patients

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Purpose: Our objective was to determine if early routine radiographic follow up at 2 to 3 weeks for patients with surgically treated tibia, fibula, or ankle fractures identified complications (ie, complications only visible on radiographs and not associated with symptoms on history taking or clinical examination) and whether these complications were clinically relevant (i.e., resulting in treatment change).

Methods: All adult patients from two Level I trauma centers who underwent surgical treatment for a tibia, fibula, or ankle fracture between January 2021 and January 2023 and who received early routine radiographic follow up between 10 and 30 days postoperatively were included. Routine radiographs were defined as radiographs that were scheduled and obtained as part of the institution's standardized follow-up protocol. The primary outcome was the rate of complications detected on early routine radiographs, stratified by the presence of associated symptoms based on history taking and/or findings on physical examination. The secondary outcome was any documented treatment change for complications.

Results: The study included 628 patients (median age 47 years, 42% male). A total of five complications in 628 patients (0.8%) were seen on early routine radiographs, of which three complications (0.5%) were exclusively identified on radiographs (i.e., not associated with symptoms). None of the three complications resulted in a change in treatment strategy. The remaining two complications were visible on radiographs but were accompanied by symptoms on history taking or physical examination.

Conclusion: The results of the current study suggest that obtaining early routine radiographs at 2 to 3 weeks after surgical treatment of tibia, fibula, or ankle fractures may not be necessary and that obtaining radiographs based on clinical indication is feasible. These findings should be considered in light of the increasing healthcare expenditures and time investment from patients and healthcare professionals.