



Case Study:

Lateral Malleolus Fracture: Delayed Fixation with Mg OSTEOCRETE Bone Void Filler



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A 48-year-old female presented with a lateral malleolus fracture after tripping. Patient initially did not want to have surgery and chose to attempt conservative management. After 10 weeks of non-weight bearing and immobilization, no signs of fracture consolidation were visualized radiographically. An MRI was ordered and images showed incomplete osseous bridging across the lateral malleolar fracture site and incomplete healing of the syndesmosis.



Fig 1A Radiographic image at initial presentation



Fig 1B Radiographic image after 10 weeks of conservative management

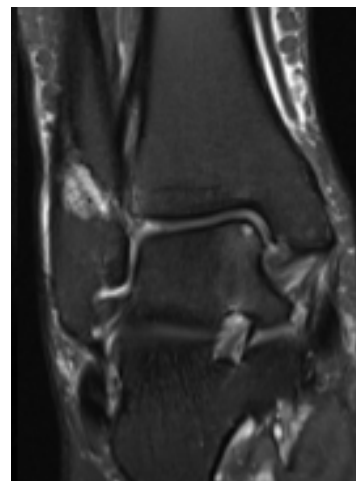


Fig 1C MRI delayed healing of the lateral malleolus fracture

Standard lateral malleolar open reduction approach was performed. The fracture line was recreated using an osteotome and mallet. Once the fracture line had been completed and the capital fragment was freed, a large defect remained once reduction had been achieved. With this free space between the fragments being too wide to heal, 5cc of Mg OSTEOCRETE Bone Void Filler was utilized to fill the gap. Mg OSTEOCRETE Bone Void Filler was prepared until it reached a paste-like consistency and was applied within the fracture fragment site that had been created. Fixation was then implemented, and anatomic reduction of the ankle joint was achieved.

The patient fell and twisted the operative extremity during the post-operative period. This resulted in the patient being non-weight bearing for 10 weeks.

Due to the patient experiencing a fall and having some ankle discomfort, an MRI was ordered 12 weeks post-operatively to ensure there was healing across the fracture site.



Fig 2 Immediate post-op radiographs demonstrating presence of Mg OSTEOCRETE Bone Void Filler with lateral malleolar fracture fixation and syndesmotic screw fixation



Fig 3 Radiographic image 10 weeks post-op

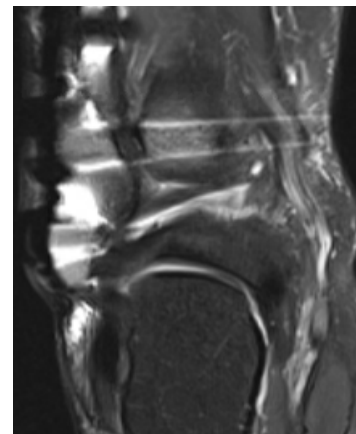


Fig 4 MRI was limited due to metal artifact, but ongoing healing was confirmed given lack of fracture gap formation and remodeling at site of bone graft placement

At the patient's 9-month follow-up, the patient had no pain and radiographic images showed Mg OSTEOCRETE resorption and complete osseous remodeling across the fracture site. The patient was now able to perform daily acts of life pain-free.



Fig 5 Radiographic image 9-months post-op demonstrating a healed lateral malleolus fracture