

A rare case of concomitant tibia shaft fracture and isolated medial malleolus fracture : Case report

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INTRODUCTION:

Concurrent tibia shaft fracture and posterior malleolus fracture have been widely discussed and published. However, tibia shaft fracture with concomitant medial malleolus fracture was rarely reported.

REPORT:

A 45-year-old man involved in a car accident presented to us with a closed right tibial and fibular shaft fracture with concomitant medial malleolus fracture.

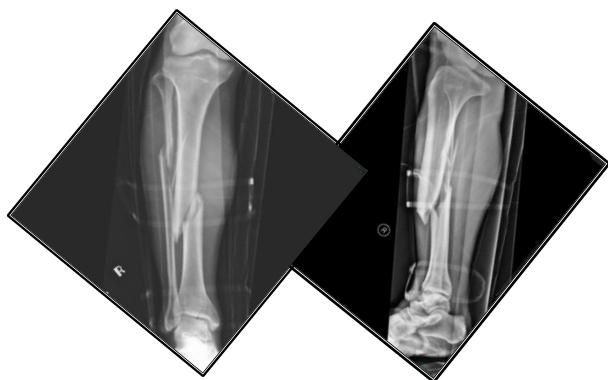


Figure1 : Spiral fracture right tibial and fibular shaft with vertical shear medial malleolus fracture.

Medial malleolus LCP hook plate and intramedullary nail tibia was done. Procedure began with standard medial approach to the ankle. A 6-7cm incision proximally from posteromedial tibia, down to posterior border of medial malleolus and extend 1-2cm distally. Saphenous neurovascular bundle was identified and protected. Periosteum and joint capsule free from edges to visualize fracture site. Fracture was reduced and 3.5mm manually contoured LCP hook plate applied. Intramedullary nailing was then performed via infrapatellar approach. 3cm skin incision made over infrapatellar region. Patellar tendon split and guide wire inserted in line with medullary canal at anterior edge of tibia plateau. Fracture reduced with bone clamp. Ball-tip guide wire

inserted, and reaming done. Tibia nail inserted, with nail end ending just proximal to the screw of hook plate. Post operative x-ray was satisfactory and patient allowed for non-weight bearing ambulation.

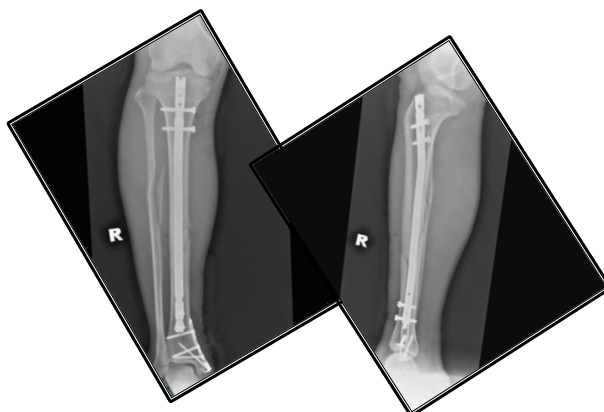


Figure2 : Medial malleolus LCP hook plate with Expert tibia nail.

DISCUSSION:

Tibia shaft fractures can be treated with intramedullary nailing or plating¹. Whereas vertical medial malleolus fractures required fixation with lag screw or antiglide plate¹. In our case, intramedullary nail was done because of its weight-sharing properties and it provide superior result in terms of shorter operative time, smaller wound and less bleeding. Meanwhile, LCP hook plate functioned to resist shearing force of vertical medial malleolus fracture. The hook over the plate act as an ‘extra screw’ to hold the distal fragment.

CONCLUSION:

Treatment of concurrent tibia shaft and medial malleolus fracture is challenging as the implants may pose obstacles to each other.

REFERENCES:

1. Barchick *et al.*(2017) Medial Malleolus Fracture Fixation in the Setting of Concomitant Tibia Shaft Fractures.