

DUDE! Where Is My Tibia?

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INTRODUCTION:

Open fracture has been considered one of the major emergencies in orthopedic. Careful planning and classification has been devised to aid in approach of such cases. In such condition, the impact of an injury is so severe that it mandates the removal of incarcerated bone pieces. Thus in these conditions, management and approach is tailored based on the condition of the patient pre-morbidly.

REPORT:

Segmental tibia bone loss.

This is a case report of a young male gentleman at the age of 20 years old that was met with motor vehicle accident and sustained with open fracture of the left tibia and fibula. His lower limb was assessed in the casualty department and classified as Grade 3B based on the Gustillo Anderson classification. Patient was subsequently admitted to ward for initial debridement and external fixator.

Initial debridement done within 48 hours of admission. Intraoperative findings revealed degloving injury over the left midshin, with incarcerated bony fragments. Neurovascular compartments however intact. Degloved skin was removed and external fixator was then applied over the left lower limb. Patient was then nursed in ward and underwent several cycles of vacuum assisted closure (VAC). After 4 cycles of VAC, wound was considerably favourable, and wound swab showed no growth after 5 days of incubation, patient went in for a superficial skin grafting (SSG) and bone cement application to act as a substitute for the bone defect segment. SSG were successful and noted postoperatively, bone defect segment was considerably large, 12 cm bone defect. Patient was then discharged home and was then planned for Ilizarov external fixator (IEF) of the left lower limb and bone transport for definitive treatment.

IEF was then proceeded once the graft matures and healed. Patient proceeded with 104 days of bone transport to the docking site. Prior to docking patient then underwent another surgery to clear the docking site from soft tissue. Currently, patient is still on IEF frame and undergoing consolidation.

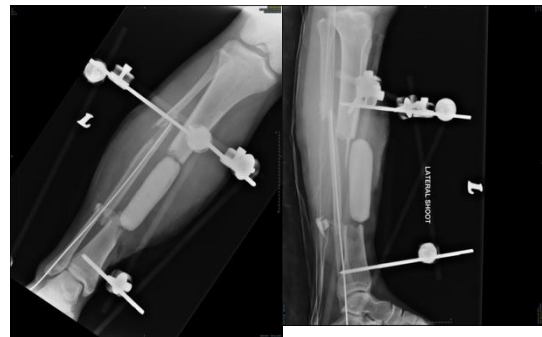


Figure 1: Post bone cement application and SSG

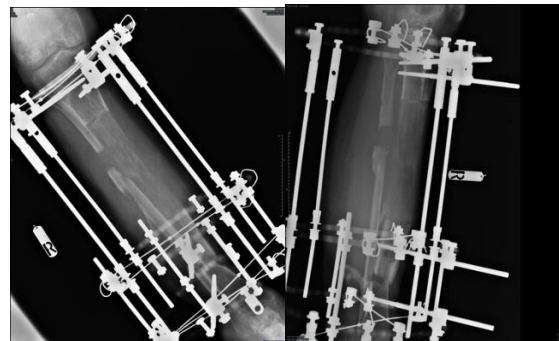


Figure 2: Radiographs taken at day 104 of bone transport

CONCLUSION:

In a nutshell, I would like to conclude that in these modern times, patient education and compliance is important in the outcome of this management. Proper initial debridement is vital in ensuring the good outcome of patient with severe soft tissue injury of open fracture.

REFERENCES:

1. F. Sailhan Bone lengthening (distraction osteogenesis): a literature review, 2011