

## Case Report: Bifocal Corticotomy & Bone Transport in Managing Osteomyelitis

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### INTRODUCTION:

Osteomyelitis is a severe infection of the bone that if left untreated, it can lead to amputation. Bifocal corticotomy and bone transport have been shown to be effective in managing such case. In this case report, we present a patient with osteomyelitis of the tibia with a history of open fracture managed using bifocal corticotomy and bone transport with an Ilizarov device.

### REPORT:

A 20-year-old male patient presented to the hospital with open comminuted fracture midshaft left tibia and fibula (Gustillo 3b). The patient had initially managed with multiple debridements, external fixation, antibiotics and multiple cycles of vacuum dressing. However, CECT showed the patient developed non union fracture of left tibia with sequestrum within the mid tibial diaphysis and short sinus tract extending into medial aspect of leg.

Intraoperatively, tibial bone including sequestrum resected was measuring 14.6 cm. Corticotomy was performed over the proximal and distal part of left tibia. Post operatively, the bone was transported gradually, approximately 1 mm per day.

The patient was followed up, during which the bone transport process was completed. Radiograph shows consolidation along the transportation path of bone both proximally and distally.

### DISCUSSION

Throughout the process, issues arised in which pin loosening with discharge that needed for debridements and readjustment.

Dermal invagination developed in between the corticotomy bones that needed fasciocutaneous release.

Other treatment such as vascularized bone graft may be considered to reduce transport time.

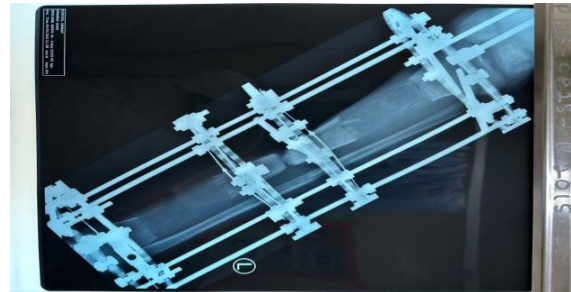


Figure 1: AP view after completed bone transport.



Figure 2: Lateral view

Patient was planned for iliac and synthetic bone graft for union after completed docking of bone transport.

### CONCLUSION:

Bifocal corticotomy and bone transport with an Ilizarov device are effective methods for managing osteomyelitis tibia with a history of open fracture. The method allows for the removal of infected bone segments and promotes the growth of healthy bone tissue. With proper management and follow-up, patients can have complete healing and functional recovery of the affected limb.

### REFERENCES:

1. Maimaiaili et al., Bifocal or Trifocal (Double-Level) Bone Transport Using Unilateral Rail System in the Treatment of Large Tibial Defects Caused by Infection: A Retrospective Study