

## Case Report: A Morsellized Fibula Bone Graft In Comminuted Pilon Non Union Fracture Of Right Tibia Fixed With Ilizarov External Fixation

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### INTRODUCTION:

A 26 year old male presented to our setting for alleged motor vehicle accident on 05/07/2015. Post trauma he sustained an Open Comminuted Pilon Fracture of right Tibia. Ilizarov external fixation and wound debridement of Right Tibia was done on 06/07/2015. Post operation four and half months (18/11/2015) noted non-union of distal end right tibia.



**Figure 1: Anterior-Posterior and Lateral view of Right Tibia and Fibula.**

### METHODS:

Patient was electively admitted on 26/11/2015 for morsellized fibula bone grafting. The bone graft was harvested from the patient using standard aseptic techniques. 2cm fibula bone was harvested. The grafts were cut into small bone chips (morsellization). The grafts were then impacted into the bone defect under general anesthesia and aseptic conditions. Ilizarov external fixation was done post morsellization.



**Figure 2: Bone Morcellizer**

### RESULTS:

The follow-up time frame was 6 months. The patient was evaluated clinicoradiology. The patient showed good progress and bone union.



**Figure 3: Post-Operative**

### DISCUSSION:

Bone grafting is used to repair bone fractures that are extremely complex, pose a significant risk to the patient, or fail to heal properly<sup>1</sup>. The current gold standard for bone grafting is the autograft, in which bone harvested from the patient's own body, usually from the iliac crest, proximal anteromedial tibia, distal anteromedial tibia, fibula, calcaneus, greater trochanter, distal femur, and ribs.<sup>1, 3</sup> Autologous bone graft is an ideal tissue because it possesses the 3 characteristics necessary for new bone growth; osteoconduction, osteoinduction and osteogenesis<sup>2</sup>.

### CONCLUSION:

At the time of final follow-up, the patient has already attained a good functional outcome. The autologous fibula morsellized bone is an excellent bone repairing material considering the satisfactory osteogenesis, osteoconduction, and osteo-induction seen in this method

### REFERENCES:

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