

Case Report: Use of GeneX Bone Graft Substitute in Large Bone Defect of Open tibia fracture

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Introduction

Bone defect management requires meticulous planning and execution that requires patient compliance and patience. Pre-existing principles of bone defect management remains the mainstay of management. Bone graft substitutes is one of the options used for fractures in orthopedics.

Report

A case of a 27 years old Indian national sustained open fracture shaft of tibia following an industrial crush injury had a large bone defect over anterolateral cortex of shaft tibia with segmental anterior tibial artery and tibialis anterior tendon injury. Debridement, exploration and external fixator was applied. Patient's expectation was discussed and opted for early definite treatment for the fracture rather than other conventional bone defect management. Interlocking nailing and Genex insertion was performed after soft tissue envelope became favorable Post operation x ray shows well reduced fracture with no obvious bony defect. The bone stimulant showed shorter bone resorption period therefore a suitable choice for this patient as he works outstation and will have longer follow up intervals.



Figure 1: Intraoperative picture of the open tibia fracture with bone loss

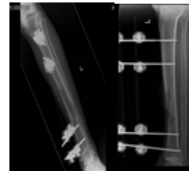


Figure 2: Pre-operative X ray of left tibia on External fixator

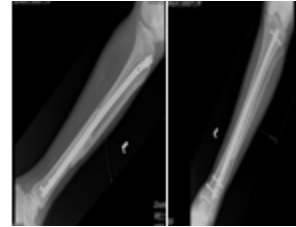


Figure 3: Post-operative X ray of left tibia with interlocking nail

Post operation, x ray series show good bone uptake and clinically his wound condition is acceptable.

Conclusion

Genex bone stimulant provides better user friendly application as it is moldable, furthermore currently follow up shows promising outcomes. There were cases proving good outcomes¹ Nevertheless, more studies regarding usage of Genex bone stimulant should be carried out to determine its efficacy and effectiveness.

Reference

1. Lowery, Kathryn; Chatuverdi, Abishek; Blomfield, Mark; Sharma, Hemant. (2018). Effectiveness of the Management of Bony Articular Collapse with Bony Defects in Tibial Plateau Fractures with the Use of Genex. England. Department of trauma and orthopedics Hull Royal Infirmary