

Tricortical Iliac Bone Graft Harvesting In Management Of Severe Open Communitated Fracture Right Olecranon With Bone Loss

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INTRODUCTION:

Bone grafting is a surgical procedure where bone from one part of the body (autograft) or a donor source (allograft) is transplanted to another location to promote bone healing, fusion, or regeneration. The iliac crest is easily accessible, and it provides a relatively large quantity of bone, making it a popular choice for bone graft procedures.

REPORT:

This is a trauma case involving a 42years old lady who involved in road traffic accident. She sustained open comminuted fracture right olecranon. She is the scheduled for wound debridement and cross elbow external fixator for management of soft tissue under emergency. Cross elbow external fixator done over right elbow with temporary Kirshner wire insertion over avulsed fracture fragment piece. Nonviable piece of fracture site was removed intraoperatively. Patient subsequently managed in ward for vacuum dressing over right elbow in view of large raw area then CT scan was planned for definitive operation planning.

She went for open reduction, plating over right olecranon with tricortical right iliac bone graft harvesting. In this case, we are using autograft which is harvested from patient's right iliac bone using tricorticotomy technique for management of the bone loss in communitated olecranon fracture with olecranon locking plate.

On follow up, check x-ray showed good progress of fracture union by evidence of callus formation. Clinically, her elbow range of movement also improved with physiotherapy training. She's now able to return back to work with functional dominant right upper limb.



CONCLUSION:

The use of harvested autograft in fracture management with bone loss is well established. It represents the most ideal graft material because it has the three major features needed to encourage fusion: osteogenesis, osteoinduction, and osteoconduction.

REFERENCES:

1. Rohit K.P, Sushil P, 2022. Iliac Crest Bone Graft Harvesting: Modified Technique for Reduction of Complications.
2. Schmitz et al. 2018. Biomechanical analysis of iliac crest loading following cortico-cancellous bone harvesting. Journal of Orthopedic Surgery.