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Pedicled vascularized fibula graft Transposition in Distal Tibia Giant Cell Tumour: A Case Report

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INTRODUCTION:

Giant cell tumour (GCT) of the bone is a locally aggressive benign tumour. It commonly occurs at proximal tibia, distal and proximal femur, distal radius, and rarely around the ankle and foot. Here we present a rare case of distal tibia GCT and successful limb salvage with transposition of a pedicled vascularized fibula graft.

REPORT:

A 25-year-old female presented with history of left ankle pain and swelling for a year, with an eventual inability to weight bear. Radiological examination revealed an expansile lytic lesion in epiphysis and metaphyseal junction with narrow zone of transition. Biopsy revealed a GCT. 10 doses of intravenous pamidronate were given before she underwent wide excision, vascularized transposition of ipsilateral fibula and Ilizarov external fixation of left lower limb, spanning the ankle joint. She was allowed to weight bear fully while on the Ilizarov external fixation. She is currently walking without pain and has been disease free for 5 years.

Figure 1: 5 years after surgery demonstrating bony union.

Figure 2: 5 years after surgery, patient is able to walk without aid and pain-free with the wound completely healed.

CONCLUSION:

GCT at distal tibia is uncommon. Unavailability of a distal tibia endoprosthesis without a 3D printed implant renders reconstruction of the distal tibia difficult. Reconstruction of distal tibia with a pedicled vascularized fibula graft and Ilizarov external fixation can achieve bony union and pain-free ambulation. Hence this proves to be a good option in limb salvage surgery.

REFERENCES:

1. Bal PK et al. Case series: Wide excision and reconstruction with free vascularized fibula for aggressive giant cell tumour of distal 3rd tibia. International Surgery Journal, Volume 9, Issue 9, September 2022, Pages 1622-1626.