A Case Report: A Successful Avascularized Fibula Graft To Infected Open Segmental Right Tibia Fracture

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INTRODUCTION

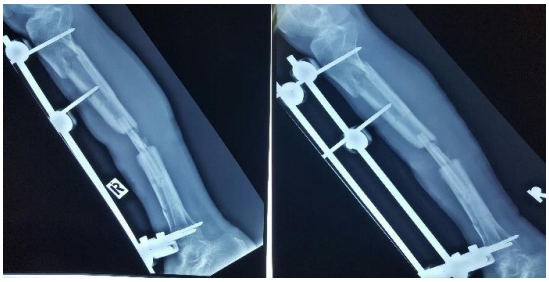
Open segmental fracture of tibia can be devastating with varying degree of early and late complication. Recent devascularised bone graft operation were done due to segmental loss rather than illizarof and patient were monitored to review the outcome.

METHODS

Clinical evaluation, assessment and investigation were done during patient hospitalisation. Medical record and xray were reviewed with permission from patient.

RESULTS

Patient was referred to Orthopaedic Department, Hospital Kajang for alleged Motovehicle accident with open segmental fracture right tibia and fibula (Gustilo IIIa). Patient were admitted and underwent wound debridement and delta frame external fixation were applied. Patient had multiple history of admission for infected wound and debridement were done. Patient had defaulted follow up for 3 month and unfortunately develop osteomylitic changes over segmental part of tibia fracture. Nine month post trauma, patient underwent another wound debridement, external fixation with right tibial osteotomy lead to 3.5cm shortening and right fibula devascularized bone graft were grafted to the tibia bone. Subsequently, patient were discharge with dressing nd antibiotic. ESR and CRP were monitored. Serial Xray of right tibia were done and compared. Latest xray noted formation of callus over bone graft site and wound were well heal. CRP reduced from 147 to 17.



DISCUSSION

The treatment options of bone loss with infections include bone transport with external fixators, vascularized bone grafts, non-vascularized autogenous grafts and vascularized allografts.(1)For a segmental bone gap of 6cm or less, traditional bone grafting techniques may suffice. For a defect greater than 6cm, a fibula is preferable as a free vascularized bone graft.(2).in our case, post operatively noted successful calus formation and still under physiotheraphy. Despite the distinct advantages of a free vascularized fibular graft, this procedure cannot correct limb length discrepancy, which is the main advantage of the Ilizarov's bone-transfer method(3)

CONCLUSION

Free vascularized fibular grafting has been reported many times in the literature for use in the salvage of massive bony defects, and that hypertrophy of the free vascularized fibular graft can also increase the limb's weight-bearing capacity (4). This might benefit for those patient had financial constraint for illizarof rocedure and end up with succefull operation.

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