

Post Traumatic Anterior Angulation Of The Midshaft Tibia Following Malunion: A Case Report

Chong YT, Yap YS, Aziz AY, Ong TK

Department of Orthopaedic Surgery, Hospital Seberang Jaya, Jalan Tun Hussein Onn, 13700 Pulau Pinang, Malaysia.

INTRODUCTION:

The tibial shaft is one of the most commonly fractured long bones, with relative frequent complication of malunion, which results in cosmetic and functional derangement. Generally, patient can tolerate angulation of 5 – 8 degree and shortening of 2 cm.¹ Surgical options include corrective osteotomy and internal fixation, distraction osteogenesis using external fixation with corticotomy to achieve progressive correction.¹⁻² This paper is to report the role of corrective osteotomy and internal fixation as the mode of treatment.

MATERIALS & METHODS:

A 49 years old man presented to us with a nineteen years of deformity of his right leg. He involved in a road traffic accident in 1999, sustained an open injury over his right leg. Patient defaulted treatment and went for traditional healer.

On examination, patient ambulates with short limb gait, with severe varus deformity of right leg. There was a clinically malunited fractures of midshaft right tibia and fibula, with an anterior angulation of leg measuring 40 degrees, varus deformity measuring 52 degrees, and limb length discrepancy of 7 cm. The radiographs showed malunited fracture of midshaft tibia and fibula with anterior angulation and varus deformity (Figure 1).

RESULTS:

Patient underwent corrective osteotomy of right tibia and fibula through antero-lateral approach. Intraoperatively, noted malunited tibia and fibula with anterior angulation, osteoclasia of tibial malunion done with 5cm of fibula shaft was removed, followed by internal fixation of right tibia done using a locking plate.

Post operatively, anterior angulation and varus deformity was corrected, with limb-length discrepancy less than 2cm. Patient able to ambulate with non-weight bearing crutches. Subsequently he was follow-up in out-patient clinic to monitor fracture healing. At third week post surgery, callus formation seen over fracture site, with acceptable alignment on

antero-posterior and lateral radiograph. (Figure 2)



Figure 1:
Antero-posterior and lateral radiograph showing malunited right tibia and fibula



Figure 2:
Post-operative antero-posterior and lateral radiograph

DISCUSSIONS:

The choice of fixation methods influenced by degree of deformity, the present of limb-length discrepancy, condition of soft tissue, and the experience of surgeon.¹⁻²

In this case, external fixation devices with distraction osteogenesis was deferred as patient is not comfortable with the bulky frame and frequent visit for adjustment. Internal fixation using intramedullary nail was not preferred as there is possibility of intramedullary canal narrowing at the angulated level. Therefore locking plate is the more suitable device for tibia fixation in this case.

CONCLUSION:

This technique was considered successful as the tibial deformity was corrected in a single surgery with osteotomy and plating.

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