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[O64] EXTERNAL FIXATION USING A LOCKING PLATE: A RELIABLE WAY IN TREATING DISTAL TIBIAL POST-TRAUMATIC OSTEOMYELITIS

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Aim: The fixation methods of distal tibial post-traumatic osteomyelitis are still challenging. The aim of this study was to evaluate the clinical and radiographic results associated with the use of a precontoured distal femoral locking plate as an external fixator in treating distal tibial post-traumatic osteomyelitis.

Method: From January 2012 to July 2014, 85 patients with distal tibial post-traumatic osteomyelitis were consecutively enrolled in this study. The initial fractures were 39 OTA 43.A1, 28 43.A2, and 18 43.A3, including 11 closed and 71 open fractures. All patients underwent thorough En-block debridement and first stage bone grafting. The precontoured distal femoral locking plate was placed on the anteromedial aspect of the tibia as an external fixator. All patients were followed for an average of 18 months.

Results: The mean surgical duration was 65 (40–80) minutes. The mean time until fracture healing was 16.7 (12–24) weeks. At final follow-up, the mean American Orthopaedic Foot and Ankle Society score was 80 (68–100). There were 4 cases of recurrent infection and no nonunions, or implant fractures. 10 patients had transient superficial pin site infection, but these did not change the clinical outcome.

Conclusions: External fixation using a precontoured distal femoral locking plate is a reliable option in treating distal tibial post-traumatic osteomyelitis. The procedure is easy to perform and the low profile plate can be concealed under stockings and can be conveniently removed.