

Study of Ender's Nailing in Lower Fourth Fractures of Tibia in Adults

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ABSTRACT

Background: Ender's nailing in lower fourth tibia fracture preserves periosteal and endosteal blood supply & fracture haematoma, which increases chances of fracture union. There is minimal risk of infection. It provides dynamically controlled motion. Stacking of the canal & splaying of nails provides reasonable axial & rotational stability. **Methodology:** This is a study of 20 patients of lower fourth extra-articular closed tibial fractures treated with Ender's nailing. Age was ranging from 20 to 62 yrs. 14 males & 6 female patients were there. Fracture was transverse in 5 patients, short spiral in 5 patients, and oblique in 8 patients & comminuted in 2 patients. Fibula was intact in 5 patients, was fractured at middle or upper third region in 7 patients and at lower third region in 8 patients 3.5 Ender's nails were used in all patients, four nails in 16 patients & three nails in 4 patients Average surgery time was 50 minutes, average blood loss was 35 cc. No patients had post-operative wound infection. All patients were immobilized for various time periods. **Results:** Average union time was 16 wks. There were 3 delayed unions. Eventually all fractures united without 2nd surgical intervention. In 5 patients there was significant proximal migration of nails, causing slight knee discomfort. Nails were removed after solid fracture union in those cases. Between 1 & 2 cm shortening was found in two patients more than 50 varus-valgus or antecurvatum-recurvatum deformity was found in two patients, but not having any symptomatic problem. **Conclusion:** Ender's nailing is a good alternative in lower fourth tibia fractures. It gives increased chances of fracture union with minimal risk of infection. 2nd surgery of bone grafting or dynamization of I/L nails is not required. The implants are inexpensive & procedure is simple. But a brief period of post-operative immobilization is required.

Key Words: Lower fourth tibial fractures, Ender's nailing, closed reduction.

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