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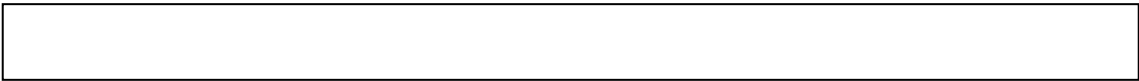
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¹ UTN: Unreamed Tibia Nail



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² Kuntsher

³ Lottes

⁴ Gustilo

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⁵ Keating
⁶ Henley

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Evaluation of surgical treatment of open tibia shaft fractures with unreamed tibia nail (UTN)

BACKGROUND: The goal of treatment of open tibia fracture is to prevent infection , fracture healing , and restore normal limb function. unreamed tibia nail (UTN , Synthese) is now replaced with external fixation for treatment of open tibia fracture because of easy insertion and low complications. The purpose of this study is to evaluate union rate with this device in open tibia fracture and compare complications with other studies.

From 1998 to 2001 ,sixty-eight patients with open grade I to grade IIIa tibia fracture were treated with unreamed tibia nailing and evaluate prospectively to find results and complications of this tool of fixation. Of these group 46 patients were available for follow up at an average of 6 months after surgery. 31 patients had type IIIa and 9 patients had type II and 6 patients had type I Gustilo open tibia fracture . operation performed at a mean of 6 days after fracture .

Results: union occurred at a mean of 18/66 weeks for type I and 20/8 weeks for type II and 26/2 weeks for type IIIa open tibia fracture. Superficial and deep infection occurred in 10 % and malunion occurred in 4/35 % and delayed union occurred in 2/17 % and nonunion occurred in 2/17 % and ankle joint stiffness occurred in 6/52 % and knee joint stiffness occurred in 2/17 % and locking screw failure occurred in 6/25 % and nail failure occurred in 4/35 % of patients.

Conclusion: The advantages of the UTN are less infection rate in contrast to external fixators and lesser need for secondary operation and greater patient comfort. Therefore, we find the UTN to be a good alternative to the other fixation devices in the treatment of open fractures of the tibia.

Key word: Open tibia fracture, Unreamed tibia nail, Gustilo classification, locking screw, External fixator