

***Management of
Infected Non-united Tibial Fractures by
Ilizarov External Fixator with compression
distraction technique***

*A Thesis Submitted for the Fulfillment of MD Degree in
Orthopedic Surgery*

By:

Mohamed Sayed Abd Elsamie Elazab

(Assistant Lecturer of Orthopedic Surgery, Faculty of Medicine, Fayoum University)

Under supervision of:

Prof. Dr.: Hassan Elbarbary

*Professor of Orthopedic Surgery
Faculty of Medicine, Cairo University*

Prof. Dr.: Kamal Samy Abd Elmeguid

*Professor of Orthopedic Surgery
Faculty of Medicine, Fayoum University*

Dr.: Mohamed Mahmoud Hegazy

*Assistant Professor of Orthopedic Surgery
Faculty of Medicine, Cairo University*

Faculty of Medicine

Cairo University

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Summary

Long standing infected non-union and gap non-union is difficult to treat and is a challenging problem for the orthopedic surgeon.

Aim of Work: To review treatment of infected non united tibia by ilizarov external. fixator and compression distraction technique.

Patients and Methods: this study included 30 patients with infected non united shaft tibia fractures with bone defect after debridement up to 6 cm. the study included 27 males and 3 females, mean age was 36 years old. The average time between fracture and inclusion in the study was 14 month. The average number of previous operations was 2 surgeries. Soft tissue compromise was present in 10 patients.

Operative technique: adequate debridement of soft tissue and bone at the fracture site followed application of the preassembled frame. Acute compression at the fracture site with check of the distal circulation followed by corticotomy at the metaphysis far to the fracture.

Results: All fractures united except one. Average time in the frame was 8 months, eradication of infection was achieved in 90% of cases. No patients required secondary surgery for bone graft nor soft tissue coverage. The ASAMI score for bone results was 90% satisfactory, and the ASAMI score for functional results was 87% satisfactory.

Conclusion: Ilizarov fixation with compression distraction technique is a safe and a reliable method for treatment of infected non united tibia. There is no definite safe limits for acute compression. Acute Compression and distraction can be used as definitive treatment immediately after trauma, and not to be considered as a salvage procedure.