

OUTCOME OF SURGICAL TREATMENT OF DISTAL TIBIAL FRACTURE TREATED WITH INTERNAL AND EXTERNAL FIXATOR AT TRAUMA CENTRE

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INTRODUCTION:

The objective of the study is to evaluate outcome of distal tibia fracture treated with internal fixation or Ilizarov external fixator (IEF). Our aim is to propose an algorithm for management of distal tibia fracture.

METHODS:

This is a retrospective observational study of all distal tibia fracture treated surgically with any form of internal fixation or any form of external fixator with emphasize on Ilizarov external fixator from January 2016 till June 2018 in Tengku Ampuan Rahimah Hospital, Klang, Selangor. Universal sampling is used for sample size and included patients with skeletally matured bone. Patient with concomitant ipsilateral ankle injury or has pre-existing ankle deformity are excluded. Data collected from medical records and radiographs are analysed.

RESULTS AND DISCUSSIONS:

Open fracture distal tibia are highly associated with infection and osteomyelitis (14.3%). Thus best manage with IEF. Simple external fixator should not be definitive fixation as it is highly associated with alignment angular deformity (11.4%) as oppose to IEF (5.7%), and weight bearing is possible.

Close extra-articular fractures managed with internal fixation showed early union (average at 4 month) and low risk of angular deformity or better reduction (2.9%) when compared to IEF. In cases of close intra-articular fractures, if it is reduced with skeletal traction, IEF is an excellent choice. If it is not, we suggest open reduction and internal fixation.

Complication seen are superficial infection 5.7%, osteomyelitis 14.3%, non-union 17%, and ankle osteoarthritis 11%. Most common mal-alignment problem is recurvatum 8.6%.

We are proposing the algorithm to treat distal tibial fracture (figure 1) and further study need to prove the effectiveness of this protocol.

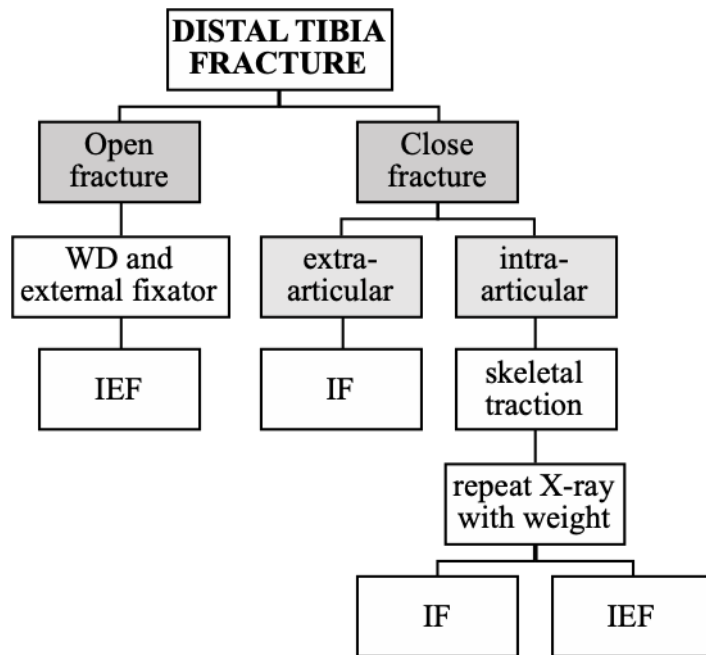


Figure 1

CONCLUSION:

Internal fixation is a good method of treatment for distal tibia fracture especially when used in suitable cases. IEF does offer similar outcome in unfavourable soft tissue condition.

REFERENCES:

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