

Tibial Periarticular Fracture - Primary Fixation With Illizarov External Fixator

Zamri Ab Rahman

Orthopaedics Department, Hospital Shah Alam, Selangor, Malaysia

Periarticular tibial fractures are challenging to treat. The principals and techniques have dramatically evolved over few decades. Tibial fractures ranges from low energy injuries in osteoporosis to high energy trauma with severe soft tissue injury. The goal of treatment these fractures are to achieve union and prevent complications. Various modalities of treatment have been described for treatment of these fractures which include traction, splinting, internal fixation and external fixation. Traction and casting provides poor union rate and high complications like knee and ankle stiffness. Open reduction and internal fixation in high velocity injuries carries risk of infection and wound complications. Soft tissue injury is the most common association with these fractures. The soft tissue injury is worse with bicondylar fractures, Pilon fracture, fracture-dislocation and metaphysio- diaphyseal dissociation. Internal fixation with plating in such injuries carries significant complications like infection, wound and hardware problems. The use of external fixation in treatment of such fractures has dramatically improved results. Closed reduction using ligamentotaxis or limited open reduction followed by Illizarov external fixation application avoids additional soft tissue injury and devitalisation of bone. Recent studies indicate that Illizarov fixation has similar or better results and fewer complications compared with plating. Lllizarov fixation can be done early compare to internal fixation. Chances of achieving accurate reduction and ligamentotaxis more when surgery is performed early. The advantage of Illizarov over internal fixation is that it allows closed reduction, minimal soft tissue damage and early mobilization of the joint. In presence of severe soft tissue swelling, blisters or open fractures, Illizarov fixation is not a contraindication, Illizarov fixator removal is a minor procedure unlike plate removal can be done under sedation on an outpatient basis. Treatment with this method gives good union rates and less risk of infection. Closed reduction, minimal soft tissue damage and early mobilization are the key to low complications