

## Enhanced External Fixator As Definitive Management Of Periarticular Fractures.

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### INTRODUCTION

The standard treatment for periarticular fractures is anatomical reduction and internal fixation. We propose enhanced external fixator as definitive fixation in periarticular fractures in selected individuals which we report in following 2 cases to achieve satisfactory union.

### CASE REPORT

First is a 71-year-old man sustained open right talus fracture with dorsalis pedis total cut (Gustilo 3c) following motor vehicle accident. With incidental finding of pulmonary tuberculosis, patient underwent enhanced external fixator. Wound debrided, talus reduced, cross ankle external fixator and tibiotalar and subtalar k wires inserted. Tendon and vascular repair were done. 3 months post-surgery, wound well healed and fracture achieved satisfactory union. Second is 75-year-old lady sustained left supracondylar femur fracture. She underwent distal femur plating which was subsequently infected. Patient developed cerebral infarct. Decision was taken for removal of implant and enhanced external fixator. Following removal of implant, throughout debridement and k wires and cross knee external fixator applied. 7 months post-surgery, wound well healed and fracture achieved satisfactory union.



**Figure 1:** xray images of open talus fracture



**Figure 2:** xray images of supracondylar fracture

### DISCUSSION

External fixator has been reported as definitive in diaphyseal fractures<sup>1,2</sup>. Commonly periarticular fracture are treated with rigid ORIF or hybrid external fixators if poor soft tissue coverage. But in certain cases, i.e., increased patient morbidity and financial constraints enhanced external fixator can be considered to achieve stable rigid fixation to achieve union. Enhanced external fixator combines external fixator with cross K-wires<sup>3</sup> more than 1/3<sup>rd</sup> diameter of bone cortex inserted in multiple direction and plane proximal and distal to fracture site. This fixation does not require advanced expertise and achieves anatomical reduction, soft tissue healing and allow early mobilisation.

### REFERENCE

1. Della Rocca et al. Journal of the American Academy of Orthopaedic Surgeons. 2006.
2. Jour Beltsios et al. Strategies in Trauma and Limb Reconstruction. 2009
3. Huber et al. Indian Journal of Plastic Surgery. 2008