

# CLINICAL OUTCOME OF ILIZAROV EXTERNAL FIXATION (IEF) IN SUPRACONDYLAR FEMUR FRACTURES

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## INTRODUCTION:

This retrospective study presents clinical and radiological evaluation of 13 patients who had supracondylar femur fracture managed with IEF.

## METHODS:

10 cases of supracondylar femur fractures managed with IEF from 2016-2017 were retrospectively identified. Information obtained from patients' case files and clinical notes used for evaluation.

## RESULTS:

10 patients ranging from 17-65 years old, were all male. All the patients sustained injury from high energy road traffic accidents. 8 were open fractures treated with temporary fixation using external fixators, subsequently converted to IEF. Whereas 2 closed fractures were treated with IEF for infected plating and primary fracture fixation respectively. Mean time to union was 11.4 months. Functional and radiological outcome were evaluated using the Association for the Study and Application of Methods of Ilizarov (ASAMI) Scoring System.

Figure 1 - Bone Results

Excellent	9 (90%)
Good	1 (10%)
Fair	0
Poor	0

## REFERENCES:

1. Alan Gram Apley, Louis Solomon, David J. Wricks, and Selarmandurai Nayagam, 2001. Apleys System of Orthopaedics and Fractures. Eighth Edition, (701:704).
2. Hoffmann, M. F., Jones, C. B., Sietsema, D. L., Tornetta, P., & Koenig, S. J. (2013). Clinical outcomes of locked plating of distal femoral fractures in a retrospective cohort. *Journal of orthopaedic surgery and research*, 8, 43. doi:10.1186/1749-799X-8-43
3. Terry Canale S, James H (1980) Beaty editors Campbell's Operative Orthopaedics
4. Mardani-Kivi M, Karimi Mobarakeh M, Azari Z. Ilizarov Fixator in Femoral Supracondylar Fractures: A Case Series with 1 - 6 - Year Follow-up, *Trauma Mon.* 2018 ; 23(4):e58433. doi: 10.5812/traumamon.58433.

Figure 2 – Functional Results

Excellent	3 (30%)
Good	3 (30%)
Fair	4 (40%)
Poor	0
Failures	0

## DISCUSSIONS:

Supracondylar femur fractures often occur as a result of high energy trauma which tend to be open fractures thus requiring careful selection of type of fixation keeping in mind soft tissue management.<sup>1,2</sup> Several case series have reported relatively high incidence of mal-union, non-union and infection.<sup>2,3</sup> IEF is proved to be an excellent method in treating supracondylar femur fractures given its advantages in better soft tissue management, early weight bearing, better union rate and lower risk of infection.<sup>4</sup>

## CONCLUSION:

This case series shows IEF is a valuable option in treating supracondylar femur fractures with patients exhibiting 100 percent union rate with acceptable functional outcome and few complications.