

Hybrid Monorail Fixation in Open Proximal Femur Fracture

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INTRODUCTION:

Surgical management of an open proximal femur fractures is challenging as the short length of the proximal fragment limits the number of pins of external fixators that can be used. A possible solution is using a multiplanar fixator using an ilizarov ring proximally combined with a monorail for the distal fragment

METHODS:

The retrospective study done at HTJ Seremban (11/2020-3/2023) includes 5 fixation of proximal femur with a hybrid monorail. Modified Rust score was used to assess the progress of bone healing

RESULTS:

Two of the patients achieved bone consolidation with the fixation subsequently removed and discharged from our follow up. 3 of the patients has achieved union(score of 11) by 1 year and 6 months. On average dynamization(removal of proximal or distal pins occurs at 12 and 16 months while 2 of the patients required to undergo a chiming osteotomy to assist in bone union.The other 3 patients are still under our follow up.

Table 1: Patient distribution with Modified Rust Score.

Duration	11-15 (Union) -number of patients	Operative intervention of - number of patients
3 months	0	0
6 months	0	0
1 year	2	0

1 year	2	2
3 months		
1 year	3	0
6 months		
2 years	3	0
6 months		

DISCUSSIONS:

A Hybrid monorail provides a rigid fixation in proximal femur fracture as the multiplanar fixation is able to overcome the short working length proximally. However management of the fracture is challenging as it requires a long duration to achieve union. Hydroxyapetite pins allow long term external fixation as it prevents pin tract infection or loosening while promoting better bone healing. Furthermore modified Rust score is an effective scoring system in evaluating union¹.

CONCLUSION:

Hybrid monorail is a viable option in treating open proximal femur fractures with Modified Rust Score as a reliable objective tool to guide further management

REFERENCES:

1. Litrenta J, Tornetta, Paul III, et al. Determination of Radiographic Healing: An Assessment of Consistency Using RUST and Modified RUST in Metadiaphyseal fractures. Journal of Orthopaedic Trauma, Nov 2015;29(11):516-520.