

Hybrid Limb Reconstruction System With Medial Support For Distal Femur Fracture : An Innovative Technique

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INTRODUCTION:

To describe the surgical technique and the outcome of a case series of comminuted intra-articular distal femur fractures treated with hybrid limb reconstruction system (LRS) with medial support.

MATERIALS & METHODS:

We retrospectively analyzed a case series of 4 patients with comminuted intra-articular distal femur fractures (DFF) treated with hybrid limb reconstruction system with medial support, in a period between July 2023 and January 2024 at a Level 1 trauma center. Baseline demographic and clinical data were recorded. Time to bone healing, function using Schatzker Lambert Score, and complications were documented.

RESULTS:

4 patients, 2 males and 2 females, with a total of 4 hybrid LRS were included in this study. 3 out of 4 patients had open fractures, all with a Gustilo Anderson type IIIA exposure. The mean age was 56.2 ± 16.05 years. The median follow-up was 84 days, without lost to follow-up. 1 out of 4 implants achieved complete radiographic consolidation during follow-up, at a mean of 2.40 ± 1.07 months. At the 3-month follow-up, 1 patients could fully bear weight painlessly or with mild pain. Schatzker Lambert Score was excellent for 1 patients, good for 2 patients, fair for 1 patients. The main postoperative complications were rigidity (3 cases), limb shortening (2 cases).

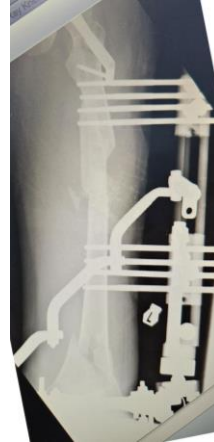


Figure 1

DISCUSSIONS:

This study showed that with the hybrid LRS, open comminuted distal femoral fractures can be managed successfully because of minimal or no surgical exposure, shorter operation time, minimum blood loss, minimal handling of bone and soft tissue with fast healing of the fracture and greater stability with medial support.

CONCLUSION:

Hybrid LRS with medial support is an effective method for treatment of distal femoral open comminuted fractures and may be considered as an alternative surgical methods in the management of these fractures.

REFERENCES:

1. F. Walcher, J. Frank and I. Marzi, "Retrograde Nailing of Distal Femoral Fracture Clear and Potential Indications," European Journal of Trauma, Vol. 26, No. 4, 2000, pp. 155-168.