

OUTCOMES OF ANTEGRADE NAILING VERSUS RETROGRADE NAILING IN TREATMENT OF FEMORAL DIAPHYSEAL FRACTURES

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Introduction: Intramedullary nailing is the gold standard treatment for diaphyseal femur fractures and can be done via an antegrade or retrograde approach. In this study we compare the union rates, post-operative hip and knee range of motion, infection rates, operative time required, intraoperative blood loss, and functional outcomes after union for each method.

Methodology: In this retrospective study, cases of acute traumatic femoral diaphyseal fractures treated with intramedullary nailing in our center without previous injury over ipsilateral limb or pathological fractures were included. Each patient was followed up for a minimum of 12 months, time to union, outcomes with knee and hip functions were recorded and evaluated on follow up.

Discussion: A total of 91 cases of acute femoral fractures were analyzed and 48 cases were treated with antegrade nailing and 43 with retrograde nailing (Table 1). Both groups showed similar union rates (95%) and time (13-15 weeks) with 4% of cases of delayed union from both groups. Operative time is significantly shorter in the retrograde nailing however blood loss was similar between both groups. In the retrograde group there was a 6.9% occurrence of implant related infection over the knee. Knee pain was more prevalent in subjects from the retrograde nailing group (10.5%). Retrograde group had significantly lesser knee range of motion as compared however their differences were clinically insignificant

Conclusion: Both retrograde and antegrade femoral nailing offers excellent union rates for diaphyseal femur fractures. The advantages to retrograde nailing are less technically demanding requiring less operation time, however complications such as post-operative knee pain and the risk of knee joint infection remains apparent.