

# Chapter 17

## Functional Outcome Assessment of Unstable Intertrochanteric Femur Fractures on Trochanteric Fixation Nail vs. Proximal Femur Nail Antirotation-II

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### **ABSTRACT**

*The purpose of this research was to assess and contrast the effects of proximal femur nail antirotation-II and trochanteric fixation nails on unstable intertrochanteric femur fractures in terms of complications, union time, surgical length, and intraoperative blood loss. Trochanteric fixation nail or proximal femur nail antirotation-II was used to treat 100 patients with unstable intertrochanteric femur fractures. The analysis was done retrospectively. The following information was documented and compared between the two groups: demographics, surgical specifics, functional outcomes evaluated using the Harris Hip Score on several occasions, complications, and union times. The groups' demographic features were found to be similar. Proximal Femur Nail Antirotation-II and Trochanteric Fixation Nail had comparable operating durations, union times, and rates of complications. Over multiple follow-up periods, both groups demonstrated an increasing improvement in the Harris Hip Score, a measure of functional outcomes.*

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## **INTRODUCTION**

Orthopaedic practitioners face great difficulty when it comes to treating intertrochanteric femur fractures, which calls for accurate diagnosis and specialised care to ensure the best possible outcomes for patients (Bala Kuta & Bin Sulaiman, 2023). These fractures are common, especially in the older population, and are frequently caused by falls or low-energy trauma (Xu et al., 2022). These fractures range in severity from stable to unstable; therefore, managing them to restore function and mobility requires a sophisticated strategy (Aditya Komperla, 2023). The basis for treatment decision-making is the division of intertrochanteric fractures into stable and unstable types. Relative stability is provided by stable fractures, which usually have an unbroken lateral wall (Parker & Handoll, 2005). In contrast, unstable fractures have damaged lateral walls, which make them more prone to displacement and provide treatment issues (Shen et al., 2013). Surgeons need to comprehend this classification since it directs them in choosing the best fixation technique for achieving maximum stability and encouraging successful healing (Parker & Handoll, 2008).

Over time, the field of treating unstable intertrochanteric fractures has changed dramatically. Surgical approaches now seek to minimise problems, encourage early mobilisation, and offer stability (Boopathy, 2023). Of the several surgical alternatives available, Proximal Femur Nail Antirotation-II and Trochanteric fixation Nail have been the most commonly used techniques (Bose et al., 2022). Every technique has unique characteristics that affect rotational control, stability, and load-sharing capabilities, all of which have an impact on patient outcomes (Zeng et al., 2017).

When assessing the effectiveness of surgical therapies for intertrochanteric fractures, functional results are crucial (Parker & Das, 2013). A recognised assessment technique called the Harris Hip Score evaluates functional recovery based on function, discomfort, and the lack of deformity (Rekha et al., 2022). This score can be used to evaluate functional outcomes and provide important information on the patient's mobility, independence, and quality of life after surgery (Herrera et al., 2008).

In addition, a number of important factors, including intraoperative blood loss, union time, surgical length, and complications, must be taken into account when evaluating the overall efficacy and safety of surgical procedures for unstable intertrochanteric fractures (Juala Catherine Jebaraj et al., 2022). Keeping an eye on these variables gives you the critical information you need to evaluate the safety and effectiveness of various surgical methods (Kothuru, 2023).

By examining the functional results and related factors after treatment with Trochanteric fixation Nail and Proximal Femur Nail Antirotation-II, this research seeks to thoroughly address the intricacies of managing unstable intertrochanteric femur fractures. We want to clarify the relative efficacy, risks, and overall effects of these surgical procedures on patient recovery and quality of life by carefully assessing these factors (Hasan Talukder et al., 2023).

Orthopaedic surgeons and other healthcare professionals must comprehend the nuances of these procedures and how they affect patient care (Valli & Arasu, 2016). In the care of unstable intertrochanteric femur fractures, the research's findings are intended to add to the body of knowledge by offering insights that may improve clinical procedures, maximise therapeutic approaches, and ultimately improve patient outcomes (Boina, 2022).

**Functional Results and Rehabilitation Difficulties:** An intertrochanteric femur fracture has consequences that go beyond what happens during surgery. During the rigorous rehabilitation phase that awaits patients, functional recovery becomes crucial. An established evaluation method that looks at functional characteristics that are important for the patient's quality of life holistically is the Harris Hip

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