

## REVIEWER'S REPORT

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**Title:** Functional Outcome and Complication Spectrum of Pantalar Arthrodesis via Retrograde Intramedullary Nail in Ankle Instability and Arthritis: A Prospective 30 Patients Observational Study

### Recommendation:

- ✓ Accept as it is .....  
 Accept after minor revision.....  
 Accept after major revision .....  
 Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Name: Dr. S. K. Nath

Date: 16/04/2025

### Reviewer's Comment for Publication:

The study concludes that pantalar arthrodesis using RETROGRADE intramedullary nailing is a viable and effective surgical option for managing advanced post-traumatic ankle instability and osteoarthritis. With significant functional score improvements, high radiographic union rates, and an acceptable complication profile, the technique demonstrates robust safety and effectiveness, comparable to recent literature. However, further multicenter randomized controlled trials with larger sample sizes and longer follow-ups are recommended to optimize patient selection criteria and enhance surgical outcomes.

## Reviewer's Comment / Report

### Strengths:

- Prospective Design:** The study's prospective observational nature allows for systematic data collection and real-time assessment of patient outcomes, reducing recall bias.
- Specific Population:** It focuses on a well-defined cohort with advanced post-traumatic ankle instability and osteoarthritis, which enhances the relevance of the findings for similar patient groups.
- Comprehensive Outcome Measures:** The use of multiple outcome measures, including the AOFAS scores, VAS pain scales, and radiographic assessments, provides a rounded view of both functional improvements and pain reduction.
- Favorable Results:** The study reports significant clinical improvements and a reasonably high radiographic union rate of 86.7% at 24 weeks, showcasing the effectiveness of the RETROGRADE intramedullary nailing technique.
- Comparison with Existing Literature:** The comparison to contemporary studies strengthens the validity of the results, showing that outcomes are on par with existing literature, thereby establishing its relevance.

### Weaknesses:

- Small Sample Size:** With only 30 patients, the findings may not be generalizable to the wider population. Larger studies would be required to validate these results.
- Absence of a Control Group:** The lack of a control group limits the ability to draw definitive conclusions about the superiority of this technique compared to other methods.
- Short Follow-Up Period:** The follow-up duration, primarily at 24 weeks, may not fully capture long-term outcomes and complications, such as adjacent joint degeneration.
- Limited Geographic Scope:** Conducted at a single institution, the findings may be influenced by local practices and patient demographics, which could affect reproducibility elsewhere.