

## REVIEWER'S REPORT

Manuscript No.: IJAR- 51022

Date: 10/04/2025

**Title:** Total Hip Arthroplasty in Avascular Necrosis of the Hip: A Prospective Observational Study on Functional and Radiological Outcomes

### 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: 11/04/2025

### Reviewer's Comment for Publication:

The study concludes that total hip arthroplasty in patients with advanced AVN significantly improves pain relief and functional outcomes, with favorable radiological results. Younger patients and those with post-traumatic AVN specifically showed better outcomes. While the study supports the effective use of fenestrated cemented femoral stems for osseointegration, it also points out the heightened risk of nerve injury with the Southern Moore surgical approach. Recommendations are made for future research to include long-term follow-up and larger sample sizes, as well as comparative analyses of different surgical techniques to ensure optimized patient outcomes in the management of AVN.

## Reviewer's Comment / Report

### Strengths:

- Prospective Design:** The study utilized a prospective observational design, which allows for better control over data collection and reduces biases associated with retrospective studies.
- Comprehensive Assessment:** A multi-faceted approach was taken to assess outcomes, including functional scores (HHS, WOMAC, VAS), radiological evaluations, and range of motion measurements, providing a thorough evaluation of the intervention's effectiveness.
- Clear Outcome Improvements:** Significant improvements were documented in both functional outcomes and pain relief, validating the effectiveness of total hip arthroplasty (THR) in patients with avascular necrosis (AVN).
- Identification of Complications:** The study detailed complications associated with different surgical approaches, highlighting the Southern Moore approach's higher risk of neurapraxia, which is valuable for clinical decision-making.

### Weaknesses:

- Limited Sample Size:** The study was conducted with a relatively small sample size (n=50), which may affect the generalizability and statistical power of the findings.
- Short Follow-Up Duration:** With a follow-up limited to 12 months, the long-term durability of the implants and its outcomes remains uncertain. Longitudinal studies are needed to assess the longevity of the surgery fully.
- Single-Center Study:** As a single-center study, the findings may not represent a broader population, limiting external validity.
- Lack of Randomization:** The observational nature of the study means that some biases related to patient selection and allocation of surgical techniques could influence results.