Medical Device Surveillance and Assessment (MDSA)

Unit of Clinical Analysis

Newsletter

Association Between Nail Type and Aseptic Revision Risk After Cephalomedullary Nailing for Hip Fracture

Although the majority of intertrochanteric femoral fractures in the United States are now treated with cephalomedullary nailing, it remains uncertain whether differences in clinical performance by nail type exist. This study compares the aseptic revision rates associated with the 3 most commonly utilized cephalomedullary nails in the United States today.

.

> "Our finding that the INTERTAN was associated with a higher risk of aseptic revision echoes the findings of other studies conducted recently in other settings, including here in the United States and in Europe."
>
> **Kanu M Okike, MD, Department of Orthopedic Surgery, Hawaii Permanente Medical Group, Honolulu, HI | Study co-author**

Study Details

19,215 patients were included in the study with 4,421 in the Gamma nail group, 2,350 in the INTERTAN nail group, and 12,444 in the TFN/TFNA nail group. In multivariable analysis involving nails of all lengths INTERTAN group was found to have a higher risk of aseptic revision compared with the TFN/TFNA group (8-year crude revision rate, 2.9% compared with 1.8%; p =0.006). The increased risk associated with the INTERTAN nail was primarily seen among the long nails (p=0.009). There were no differences in aseptic revision observed between the Gamma group and the TFN/TFNA group.

Practice Considerations

Our study documents an increased risk of revision for the INTERTAN in the cephalomedullary nailing of geriatric hip fractures, especially for long nails. Further research is required to determine the specific reasons for this finding.

Link to Published Manuscript

Okike K, Chang RN, Royse KE, Fasig BH, Sadeghi C, Jackman JM, Navarro RA, Fang AS, Paxton EW (2025). **Association Between Nail Type and Aseptic Revision Risk After Cephalomedullary Nailing for Hip Fracture** *J Bone Joint Surg Am*, 107 (2): 174-183.

Full Authorship

Hawaii Permanente Medical Group
Kanu M Okike, MD, Department of Orthopedic Surgery, Honolulu, HI

The Permanente Medical Group
Andrew S Fang, MD, Department of Orthopedic Surgery, South San Francisco, CA

Northwest Permanente Medical Group
James M Jackman, MD, Department of Orthopedic Surgery, Clackamas, OR

Southern California Permanente Medical Group
Cameron Sadeghi, MD, Department of Orthopedic Surgery, San Diego, CA
Ronald Navarro, MD, Department of Orthopedic Surgery, Harbor City, CA
Clinical Analysis, Medical Device Surveillance & Assessment, San Diego, CA
Elizabeth W. Paxton, PhD
Richard N Chang, MPH
Kathryn E Royse, PhD
Brian H Fasig, PhD