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**Dr. Siddharth Gunay**[MBBS, MS Orthopaedics, MRCS(Edinburgh)]<sup>1</sup>, Dr. Tanmay Avhad [MBBS, MS Orthopaedics, MRCS(Edinburgh)]<sup>2</sup>

<sup>1</sup>Clinical Fellow in Arthroplasty & Sports Medicine  
Mumbai, Maharashtra, India

<sup>2</sup>Clinical Fellow in Endoscopic Spine Surgery, Indore, Madhya Pradesh, India

## Comparison of Clinical and Functional Outcomes in Patients Operated with Standard Offset Stem versus High Offset Stem in Total Hip Replacement: A Retrospective Study

### Background

Restoration of femoral offset in total hip arthroplasty (THA) is essential for optimal hip biomechanics and improved functional outcomes. This study aimed to compare the clinical and functional results of patients undergoing total hip replacement using standard offset versus high offset femoral stems.

### Methods

A retrospective comparative study was conducted on 40 patients treated for avascular necrosis of the hip with THA from February 2023 to February 2024. Patients were divided into two equal groups based on implant type: standard offset and high offset femoral stems. Clinical improvement and functional outcomes were assessed using the Harris Hip Score at 6, 12, and 18 weeks postoperatively.

### Results

Group A (high offset) demonstrated significantly better outcomes, with 70% achieving excellent Harris Hip Scores (>90) compared to 25% in Group B (standard offset). Additionally, Group A showed fewer cases in the poor and fair outcome ranges. The results support the hypothesis that increasing femoral offset improves the abductor lever arm and reduces joint reaction forces, leading to enhanced function and patient satisfaction.

### Conclusion

High offset femoral stems provide superior functional results in THA and should be considered when tailoring implant choice to patient-specific anatomical requirements.

### Keywords

High offset stem, Total hip replacement, Harris Hip Score, Femoral offset, Arthroplasty

### Biography

Dr. Siddharth Gunay is an MRCS-qualified orthopaedic surgeon with over five years of clinical experience in trauma, arthroplasty, and sports orthopaedics. He completed his MS Orthopaedics at TNMC & BYL Nair Hospital, Mumbai, and has pursued focused fellowships in joint replacement and sports medicine. He has nine peer-reviewed publications and multiple presentations at national-level conferences. Dr. Gunay is currently preparing for advanced NHS registrar-level roles in the UK and has a strong interest in hip, knee, and shoulder reconstruction.