



Orthopaedics

PRIMARY BIPOLAR HEMIARTHROPLASTY WITH CERCLAGE WIRING FOR AN UNSTABLE COMMINUTED INTERTROCHANTERIC FEMUR FRACTURE IN AN ELDERLY PATIENT: A CASE REPORT

Dr. Rana Aashutosh*	Post graduate, Department of Orthopaedics, PES Medical College, Kuppam, India. *Corresponding Author
Dr. Nagakiran	Professor & HOD, Department of Orthopaedics, PES Medical College, Kuppam, India.
Dr. Sudeep M.N.	Associate professor, Department of Orthopaedics, PES Medical College, Kuppam, India.
Dr. Venkatesh Reddy	Associate Professor, Department of Orthopaedics, PES Medical College, Kuppam, India.

ABSTRACT **Background:** Unstable intertrochanteric femur fractures in elderly patients remain difficult to manage because osteoporosis and fracture comminution often compromise internal fixation. Primary bipolar hemiarthroplasty has emerged as a suitable alternative that facilitates early mobilisation and functional recovery. **Case Report:** A 74-year-old female presented with pain, deformity, and inability to bear weight following a slip and fall at home. Radiographic evaluation demonstrated a comminuted unstable right intertrochanteric femur fracture. Considering the patient's advanced age and poor bone quality, primary bipolar hemiarthroplasty with stainless steel cerclage wiring was performed in a single-stage procedure. Calcar reconstruction and restoration of limb length were achieved intra-operatively. **Results:** The postoperative period was uneventful. The patient was mobilised with full weight-bearing as tolerated and recovered satisfactory hip function without complications. **Conclusion:** Primary bipolar hemiarthroplasty with cerclage wiring is a reliable treatment option for selected elderly patients with unstable intertrochanteric fractures, allowing early ambulation, restoration of limb length, and satisfactory functional outcomes.

KEYWORDS : Intertrochanteric fracture, Bipolar hemiarthroplasty, Cerclage wiring, Elderly, Hip fracture, Early mobilisation.

INTRODUCTION

Intertrochanteric femur fractures are among the commonest osteoporotic fractures encountered in elderly individuals, particularly women. These injuries are associated with significant morbidity, mortality, and loss of independence. Although internal fixation remains the standard treatment, unstable and comminuted fractures frequently result in fixation failure because of severe osteoporosis.

Primary hemiarthroplasty has therefore become an attractive alternative in carefully selected elderly patients by providing immediate mechanical stability and allowing early weight-bearing.

Case Report

A 74-year-old woman presented to the emergency department following a slip and fall at her residence. She complained of severe pain over the right hip and inability to bear weight immediately after the injury.

Clinical examination revealed shortening and external rotation deformity of the right lower limb with tenderness over the proximal femur.

Radiographs confirmed an unstable comminuted intertrochanteric fracture of the right femur.

After preoperative optimisation and informed consent, the patient underwent primary bipolar hemiarthroplasty. Reconstruction of the greater trochanter and calcar was achieved using stainless steel cerclage wiring. Limb length equality and prosthetic stability were confirmed intra-operatively.

Postoperatively, the patient remained haemodynamically stable. Physiotherapy was initiated on the first postoperative day, and weight-bearing was allowed as tolerated. At follow-up, the patient demonstrated satisfactory functional recovery with painless ambulation and no evidence of implant-related complications.

DISCUSSION

Management of unstable intertrochanteric fractures in elderly patients continues to be challenging. Internal fixation may fail because of severe osteoporosis, medial comminution, and poor purchase of implants. Failure often results in prolonged immobilisation, which increases the incidence of pulmonary complications, deep vein thrombosis, pressure ulcers, and muscle wasting.

Primary bipolar hemiarthroplasty addresses many of these limitations by providing immediate implant stability and permitting early rehabilitation. Cerclage wiring effectively reconstructs the calcar and trochanteric fragments, restoring the biomechanics of the hip and improving prosthetic stability.

Several published studies have reported favourable functional outcomes, lower reoperation rates, and earlier mobilisation following primary hemiarthroplasty in elderly patients with unstable intertrochanteric fractures. Careful patient selection and meticulous surgical technique remain the key determinants of successful outcomes.

CONCLUSION

Primary bipolar hemiarthroplasty with cerclage wiring is a valuable treatment option for unstable comminuted intertrochanteric fractures in elderly patients. The technique provides immediate stability, facilitates early weight-bearing, restores limb length, and results in satisfactory functional outcomes while reducing complications associated with prolonged immobilisation.

Patient Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying clinical images.

Ethical Approval

Ethical approval was not required for this single case report according to institutional policy. Patient confidentiality has been maintained throughout the manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest.

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