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# Revision Total Hip Arthroplasty With Dual Mobility Cup for Neglected Non- Traumatic Dislocation Following Conversion Long Stem THA After Failed Intertrochanteric Fracture Fixation: A Case Report

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**Case Report**

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# "Revision Total Hip Arthroplasty With Dual Mobility Cup for Neglected Non-Traumatic Dislocation Following Conversion Long Stem THA After Failed Intertrochanteric Fracture Fixation:"A Case Report

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ABSTRACT

## Background

**Conversion total hip arthroplasty (THA) following failed internal fixation of proximal femoral fractures is technically challenging and is associated with an increased risk of complications, including postoperative instability.[1,2] Dual mobility constructs have been increasingly used in revision THA to improve stability and reduce the risk of recurrent dislocation.[4,5]**

## Case presentation

**We report the case of a 62-year-old South Asian female who presented with chronic pain and inability to walk following neglected non-traumatic dislocation of a previously operated left long-stem total hip replacement. She had initially sustained a left intertrochanteric femur fracture following a slip and fall at home,**

**which was treated with open reduction and internal fixation using an angle blade plate. Following implant failure, she underwent conversion to an uncemented long-stem THA. Within two weeks, she developed spontaneous anterior dislocation of the prosthetic hip without trauma. Closed reduction under anaesthesia was attempted but failed, and she subsequently had persistent pain, functional limitation, and inability to bear weight. Imaging demonstrated a dislocated prosthesis with extensive fibrosis and pseudo-acetabulum formation. Revision THA was performed using an extended trochanteric osteotomy for removal of the existing femoral stem, an uncemented long diaphyseal-fitting revision femoral stem, and a cemented dual mobility acetabular cup. Cerclage wiring was used to provide additional support. The hip was stable intraoperatively, and postoperative rehabilitation was initiated. The patient achieved full weight-bearing mobilisation with a walker from postoperative day 2, with satisfactory postoperative radiographs and significant relief of pain.**

## Conclusion

**Neglected prosthetic hip dislocation following conversion THA after failed fracture fixation presents a complex reconstructive challenge because of altered anatomy, fibrosis, pseudo-acetabulum formation, and compromised soft tissues.[1,2] Revision THA using an uncemented long revision stem combined with a cemented dual mobility acetabular component can provide a stable reconstruction in such high-risk cases.[4,6] Dual mobility articulation should be considered in revision THA when there are significant risk factors for instability.[4,5,7]**

## INTRODUCTION

**Conversion total hip arthroplasty (THA) following failed internal fixation of proximal femoral fractures represents a technically challenging procedure with increased risk of complications compared with primary or a RevisionTHA[1,2]. Postoperative instability remains a major concern due to altered hip biomechanics, compromised soft tissue and surrounding structures, implant and component-related factors, and patient-related risk factors[4,5,7]. Dual mobility constructs have been increasingly utilized in revision arthroplasty to improve stability and decrease the risk of recurrent dislocation.[4,8]**

## Case Presentation Details

**We report the case of a 62-year-old South Asian female who presented with chronic pain and inability to walk following non-traumatic dislocation of a previously operated left long stem total hip replacement.**

**The patient initially sustained a left intertrochanteric femur fracture following a slip and fall at home, which was managed with open reduction and internal fixation using an angle blade plate on 29/03/2025. Subsequently, due to implant failure, she underwent conversion to an uncemented long stem total hip replacement on 01/07/2025.**

**After initial postoperative mobilisation and weight bearing, she developed spontaneous anterior dislocation of the prosthetic hip within two weeks without any history of trauma or fall. An attempt of closed reduction under anaesthesia was performed on 17/07/2025 and had failed; however, the patient continued to have persistent pain, functional limitation, and inability to ambulate or bear weight.**

**She was a known case of systemic hypertension and type 2 diabetes mellitus for 15 years on regular medications. She also had congenital left-sided foot drop.**

**On clinical examination, the previous surgical scar was healthy. A limb length discrepancy of approximately 2 cm shortening was noted on the left side. Anterior hip joint line tenderness was present. Hip range of motion was significantly restricted due to pain. Neurovascular examination revealed pre-existing foot drop with intact distal circulation.**

**Radiographs and CT images demonstrated dislocation of the left total hip prosthesis. Figures 1-4 as shown below**

**(Figure 1: Preoperative radiograph of pelvis with both hips showing dislocated long stem THA)**



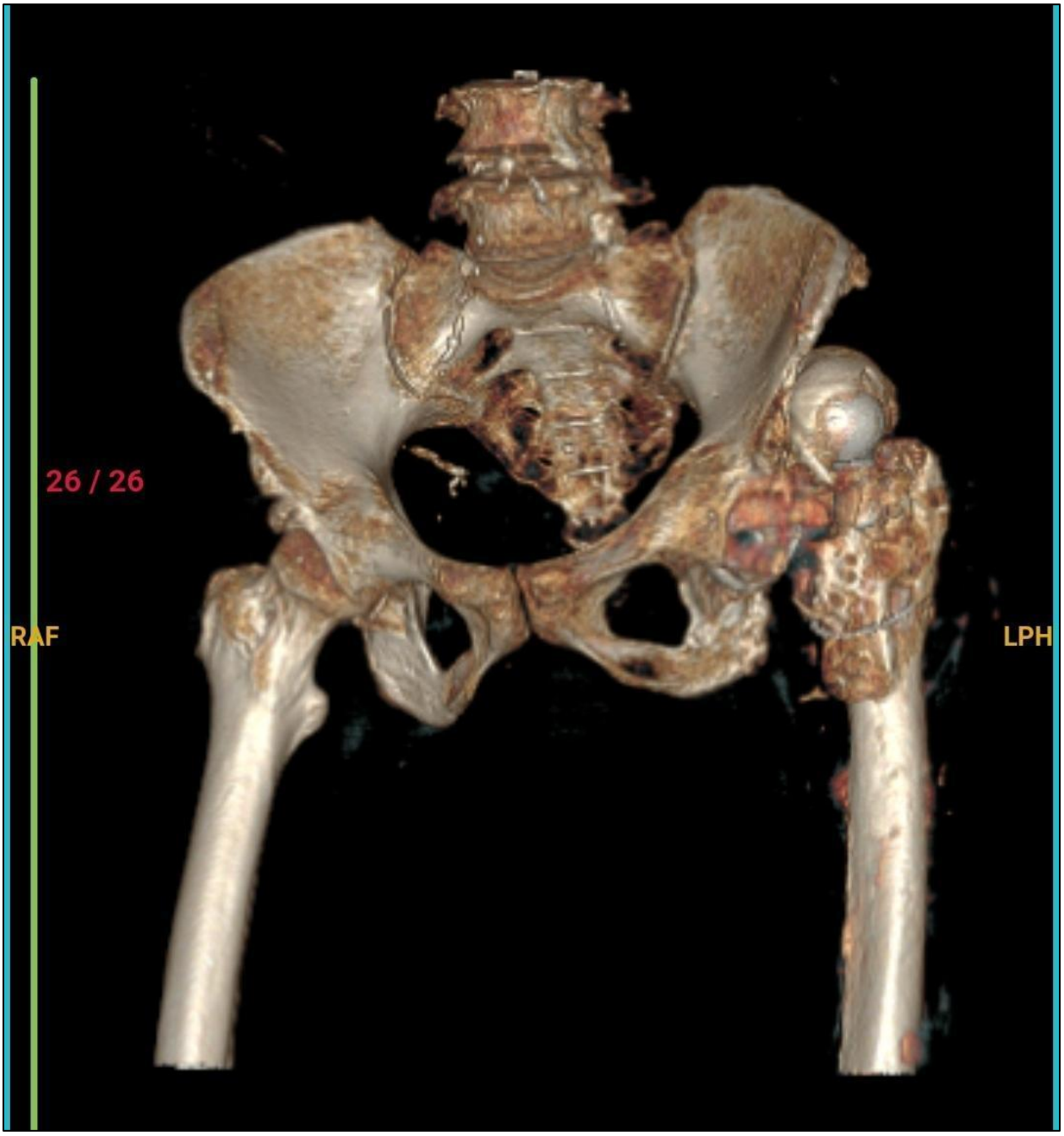
**(Figure 2: Preoperative radiograph of left femur AP view showing dislocated long stem THA)**



**(Figure 3: Preoperative radiograph of left femur Lateral view showing dislocated long stem THA)**



**Figure 4: Preoperative 3D CT image of Pelvis view showing dislocated long stem THA with excessive fibrosis and pseudo acetabulum formation)**



**SURGICAL TECHNIQUE**

**After complete preoperative evaluation and clinical planning, the patient underwent revision total hip replacement with long diaphyseal fitting stem and dual mobility Cup of the left side on 23/06/2026 under combined spinal and epidural anaesthesia.**

**The patient was positioned in right lateral decubitus position. Under strict aseptic precautions, the operative limb was prepared and draped. A lateral approach to the hip was performed using approximately a 20 cm incision extending from the greater trochanter along the previous surgical scar.,as shown in below figure 5**

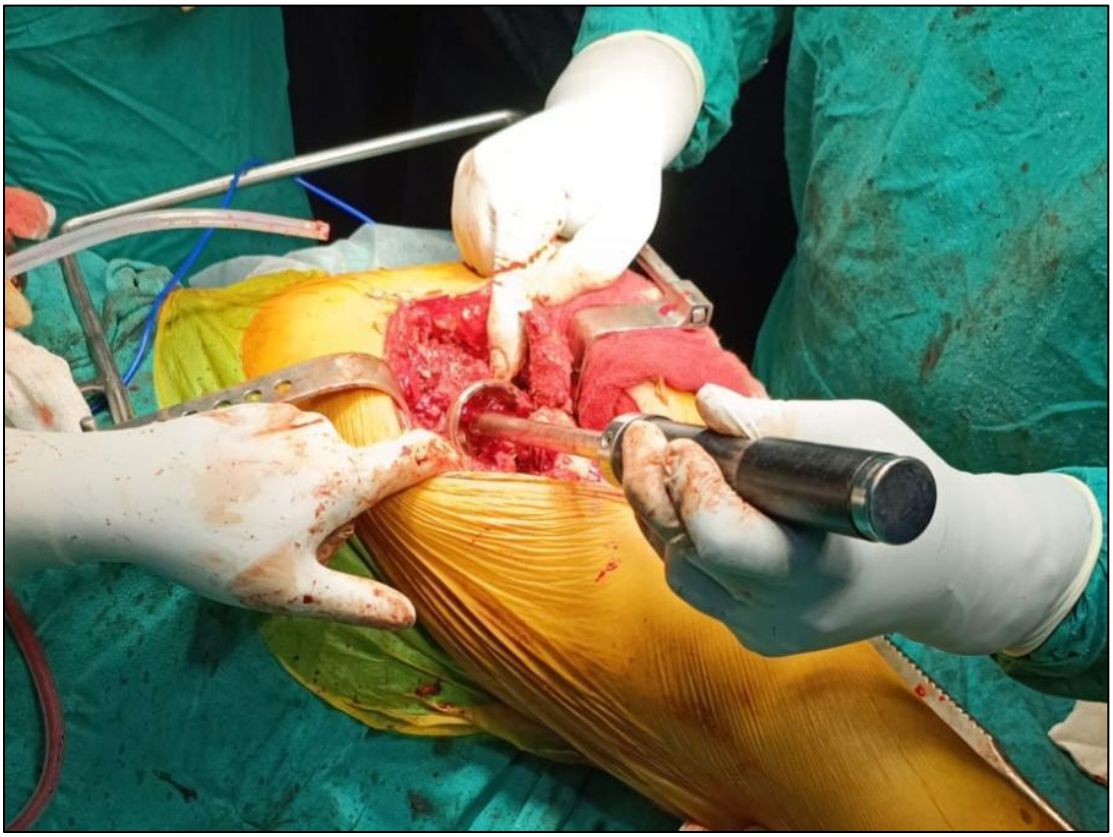
**(Figure 5- Showing soft tissue dissection to expose the dislocated prosthetic joint)**



**Dissection was carried through the soft tissue planes. Dense fibrous tissue surrounding the prosthetic joint was encountered and carefully excised. The femoral head component was exposed, and surrounding osteophytes and bony overgrowth were removed using osteotome and bone nibbler.**

**The acetabular component was exposed after removal of surrounding fibrous tissue.There was a remarkable formation of Pseudo Acetabulum due to long standing neglected dislocation.The previous acetabular cup along with the fixation screws was removed. The acetabulum was sequentially reamed until healthy bleeding cancellous bone was obtained, as shown in figure 6**

**(Figure 6- Showing serial Acetabular reaming)**



**After adequate preparation, reconstruction was performed using a 48 mm cemented dual mobility acetabular cup.**

**For the femur preparation,Soft tissue and the entire fibrosis around the greater trochanter was cleared. An extended trochanteric osteotomy (ETO)(Figure 7) was performed to safely extract the existing femoral stem. The femoral component was removed with the help of extraction instruments.**

**(Figure 7- Showing Extraction of stem using ETO technique)**



**The femoral canal was sequentially reamed and prepared. Trial reduction was performed to assess stability, offset restoration, range of motion, and limb length.**

**Following satisfactory trial assessment, an uncemented revision long diaphyseal fitting femoral stem (13.5 mm × 275 mm) was implanted.**

**A 28 mm (+1.5 mm) femoral head with 48 mm dual mobility liner was used. Final reduction was achieved and intraoperative assessment confirmed a stable hip throughout the functional range of motion with satisfactory limb length Additional support to prevent further dislocation was provided using the cerclage wiring technique with the stainless steel wire**

**Thorough wound irrigation was performed. Layer-wise closure was done over a suction drain(Figure 8) and sterile dressing was applied.**

**(Figure 8- Showing wound closure and suction drain placement)**



**The procedure was uneventful and the patient was shifted to the postoperative recovery unit in stable condition.**

**Implant Details**

**1. Cemented Dual Mobility Acetabular Cup – 48 mm**

**2. Dual Mobility Liner – 48 mm (28 mm)**

**3. Internal Femoral Head – 28 mm (+1.5 mm)**

**4. Uncemented Revision Femoral Stem – 13.5 × 275 mm**

**5. Bone Cement – 40 g**

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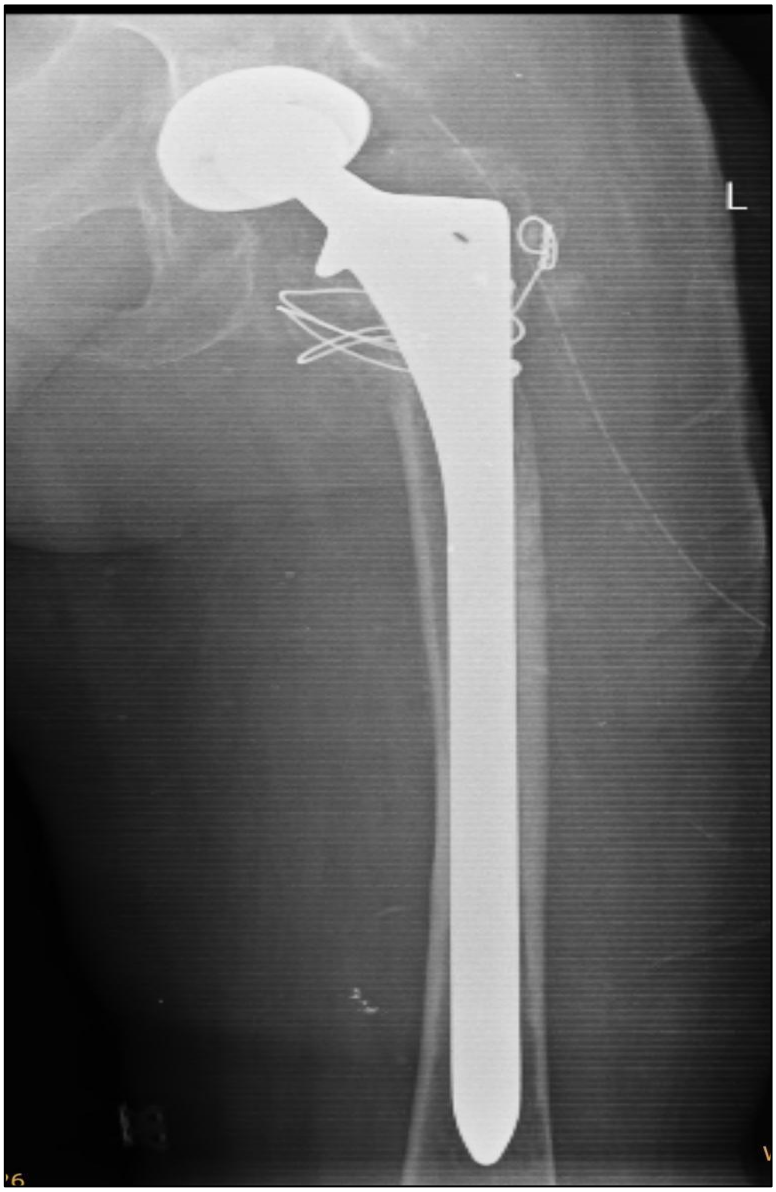
**Postoperative Protocol**

**Postoperatively, intravenous antibiotics, analgesics, and DVT thromboprophylaxis were administered as per institutional protocol.**

**Physiotherapy including static quadriceps strengthening, ankle pump exercises, and assisted mobilisation was initiated.**

**Serial postoperative radiographs (Figure 9,11) were obtained to evaluate implant positioning.**

**(Figure 9: Immediate postoperative radiograph showing reduced hip with revision stem and dual mobility cup)**



## DISCUSSION

**Instability after total hip arthroplasty remains one of the most challenging complications, particularly following conversion arthroplasty after failed fracture fixation[1]. Previous surgery causes distortion of anatomy, scar formation, altered biomechanics, and compromise of the abductor mechanism, all contributing to increased risk of dislocation[1,2,3].**

**Anterior dislocation following THA may occur due to excessive component anteversion, soft tissue imbalance, inadequate restoration of offset, impingement, or neuromuscular abnormalities.[3,5]**

**In the present case, previous failed fixation, conversion arthroplasty, altered proximal femoral anatomy along with the fibrosis and formation of pseudo acetabulum, and pre-existing neuromuscular involvement in the form of congenital foot drop were possible contributing factors.[4,5,7,8]**

**Revision reconstruction aimed at restoring hip stability, correcting biomechanics, and preventing recurrent instability. Dual mobility cups provide increased effective femoral head size, improved jump distance, and greater range of motion before impingement, making them valuable in revision THA for instability.**

**Extended trochanteric osteotomy provided safe removal of the previous femoral stem while preserving remaining bone stock and allowing secure revision stem implantation.**

**Limitations:**

**This report describes a single case and therefore cannot establish the superiority of dual-mobility articulation over other strategies for prevention of**

**recurrent instability. Long-term clinical and radiological follow-up is required to assess durability of the reconstruction and the risk of complications.**

**Figure 10- Showing patient doing immediate full weight bearing mobilisation on Post operative Day 2)**



**Figure 11- 2 months follow up x ray**



## CONCLUSION

**Chronic instability following conversion total hip arthroplasty is a complex problem requiring careful evaluation and appropriate reconstruction. Revision THA using an uncemented long revision stem combined with a cemented dual mobility acetabular component provides a reliable treatment option by restoring stability and reducing risk of recurrent dislocation.[4,6,7]**

**Dual mobility articulation should be considered in revision cases with increased risk factors for instability, especially following failed fracture fixation and multiple previous hip surgeries.[1,2,4,6,7]**

## CLINICAL TIMELINE

| DATE | CLINICAL EVENT |
|---|---|
| **29/03/2025** | **Left intertrochanteric fracture treated with ORIF using angle blade plate** |
| **01/07/2025** | **Implant failure → conversion Arthroplasty to uncemented long-stem THA** |
| **Mid July 2025** | **Spontaneous non-traumatic anterior prosthetic hip dislocation** |
| **17/7/2025** | **Attempt of Closed reduction under Anesthesia- Failed** |
| **17/7/2025 to Mid June 2026** | **Persistent pain, inability to bear weight or walk, neglected the dislocation for around 1 year** |
| **23/06/2026** | **Revision THA with ETO, long revision stem and cemented dual mobility cup** |
| **POD 2** | **Beginning of full weight bearing mobilisation assisted with walker** |

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**Keywords**

**Revision total hip arthroplasty; Dual mobility cup; Extended trochanteric osteotomy; Case Report ; Failed intertrochanteric fracture fixation.**

## PATIENT PERSPECTIVE

**Patient reported significant relief in pain and the ability to perform full weight bearing mobilisation and no other post operative complications ,Figure 10 and 11**

## DECLARATIONS

## ETHICS AND CONSENT TO PARTICIPATE

**Appropriate "Written Informed consent" has been taken from the patient regarding the operative procedure and publication of the case report**
**Written informed Consent available for the review by Editor in Chief of the journal**

**CONSENT TO PUBLISH- Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal**

**MATERIALS AND DATA- NOT APPLICABLE**

**COMPETING INTERESTS- NOT APPLICABLE**

**FUNDING- NOT APPLICABLE**

**ACKNOWLEDGEMENTS- NOT APPLICABLE**

**AUTHOR CONTRIBUTIONS- Primary Author has been assisting surgeon in the case with all pre op planning and author (2) was operating surgeon and author (3) was involved in data collection and author (4) has been formatting the case report with author (1). Overall authors have been a team in pre op planning, surgery as well as post op rehabilitation**

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## Supplementary Files

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