



OUTCOME OF IMPACTION BONE GRAFTING WITH ACETABULAR CAGE AND UNCEMENTED CUP IN REVISION TOTAL HIP ARTHROPLASTY WITH SEVERE ACETABULAR BONE LOSS: A CASE REPORT

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ABSTRACT

Introduction: Management of acetabular bone loss during revision total hip arthroplasty (THA) remains challenging. Impaction bone grafting (IBG) combined with acetabular cage and uncemented cup aims to restore bone stock while achieving stable fixation. **Case Report:** A 62-year-old male presented with pain and instability following failed total hip replacement. Radiology showed Paprosky type IIIA defect. Revision THA was done using IBG, acetabular cage, and uncemented cup. At 24 months follow-up, good functional recovery and graft incorporation were noted. **Conclusion:** IBG with cage and uncemented cup provides reliable outcomes in severe acetabular bone loss.

KEYWORDS : Revision Total Hip Arthroplasty, Acetabular Bone Loss, Impaction Bone Grafting, Acetabular Cage, Uncemented Cup

INTRODUCTION

Revision THA with acetabular bone loss remains a major reconstructive challenge. The aim is restoration of hip biomechanics, stable fixation, and bone stock preservation. Various options exist including structural allografts, jumbo cups, augments, and IBG. IBG converts cavitory defects into biologically active bone but requires mechanical protection in severe defects. This case report highlights outcome of IBG with cage and uncemented cup.

Case Report

A 40-year-old male presented with left hip pain and difficulty walking for 18 months following primary THA done 10 years earlier. There were no signs of infection. Radiographs and CT scan showed Paprosky type IIIA acetabular defect. Infection was ruled out with laboratory investigations.



Surgical Technique

Revision THA was performed via posterior approach. Loose acetabular component was removed. Morselized cancellous allograft was impacted sequentially. An acetabular reconstruction cage was fixed with screws. A porous uncemented acetabular cup was implanted inside the cage. Femoral stem was retained.

Post-operative Protocol

Toe-touch weight bearing was allowed for 6 weeks followed by gradual full weight bearing by 12 weeks. Physiotherapy and thromboprophylaxis were given.

Outcome

At 24 months follow-up, patient was pain-free and ambulatory without support. Harris Hip Score improved from 42 to 88. Radiographs showed stable implants and graft incorporation.

DISCUSSION

Severe acetabular defects compromise fixation in revision THA. IBG restores bone stock but requires protection. Cage provides mechanical stability while porous cup enables osteointegration. Literature supports favorable outcomes with this combination. Our case demonstrates satisfactory clinical and radiological results.

CONCLUSION

IBG with acetabular cage and uncemented cup is an effective method for severe acetabular bone loss in revision THA, providing stability, bone restoration, and good functional outcome.

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