FRACTURE AND DISLOCATION OF FEMUR HEAD: A CASE REPORT

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ABSTRACT:

INTRODUCTION: Femoral head fractures occur in association with 5% to 15% of hip dislocations. Reduction of a hip dislocation with an associated femoral head fracture (Pipkin types I and II) should be performed as soon as possible to avoid complications. The purpose of this study is to assess the safety and functional and radiological outcomes of surgical hip dislocation by Ganz technique for treatment of femoral head fracture.

BACKGROUND AND PURPOSE: Recent data suggest that safe surgical dislocation by Ganz technique is a safe procedure for treatment of femoral head fracture, we implemented in 2 cases & present our experience with this method.

RESULTS: Both patients had best outcome without any pain & dislocation

CONCLUSION: Open reduction and internal fixation of femoral head fracture using safe surgical hip dislocation through Ganz technique is a viable treatment option and provides satisfactory results with low complication rate.

KEYWORDS: Hip dislocation, Femoral head fracture, Pipkin classification, Ganz technique, Femoral head osteonecrosis, Trochanteric flip osteotomy

INTRODUCTION:

Femoral head fractures are rare traumatic injuries that are usually associated with hip dislocations. Hip dislocations and femoral head fractures typically are the result of a high-energy mechanism. Most hip dislocations are posterior, and the position of the injured extremity is shortened, internally rotated, and adducted. Femoral head fractures occur in association with 5% to 15% of hip dislocations because of contact between femoral head and posterior rim of acetabulum. Reduction of a hip dislocation with an associated femoral head fracture (Pipkin types I and II) should be performed as soon as possible to avoid complications. The purpose of this study is to assess the safety and functional and radiological outcomes of surgical hip dislocation by Ganz technique for treatment of femoral head fracture

AIM:

• To check the viability of ORIF with Herbert screws by safe surgical hip dislocation through Ganz approach
• To minimise complication rate.

CASE REPORT:

• (Case 1), 30-year-old male was brought to ER with Complaints of localized hip pain, unable to bear weight
• (Case 2), 26-year-old male was brought to ER with Complaints of localized hip pain, unable to bear weight
• History of dashboard injury to both patients just before the time of presentation

O/E:

• Nodular swelling felt over posterior gluteal region for both patients
• Tenderness of anterior hip joint for both patients
• Hip movements restricted for both patients
**Fig 1 (case 1):** clinical picture of patient showing shortened, internally rotated, and adducted right lower limb

![Clinical Picture](image1)

**Fig 2 (case 1):** preop x ray pelvis with both hip joints ap view showing right femur head fracture and dislocation

![Preoperative X-ray](image2)

**Fig 3,4,5 (case 1):** preoperative CT pelvis with both hip joint: showing fracture (pipkin type 2) and dislocation of right femur head

![Preoperative CT](image3)

**Fig 6,7,8 (case 2):** preoperative x ray & CT pelvis with both hip joint: showing left femur head fracture (pipkin type 2) and dislocation

![Preoperative X-ray & CT](image4)

**TREATMENT:**

- ORIF with Herbert screw fixation by safe surgical anterior dislocation by Ganz procedure

The procedure is performed with use of a conventional Kocher-Langenbeck exposure with the patient in the lateral position. The trochanteric flip is performed, allowing exposure of the anterior capsule, which is incised to dislocate...
the head anteriorly. Fracture fixation is performed with use Herbert screws followed by relocation of the head, closure of the capsulotomy, and fixation of the osteotomy.

**Fig 9,10**: intraoperative images pre and post fixation using Herbert screws

**Fig 11**: Immediate post operative Xray

**Fig 12**: 4 months old post operative Xray

**Post operative x rays (case 1):**

**Fig 13**: Immediate post operative Xray

**Fig 14**: 4 months old post operative Xray

**Post operative x rays (case 2):**

**Fig 15 & 16 (case 1)**: Postoperative hip ROM o, extension: 0-20°, flexion: 0-120°
RESULTS:
• Femoral head fracture (Pipkins type 2) dislocation treated ORIF WITH HERBERT SCREWS by Ganz procedure
• Both Patients started weight bearing two months after surgery,
• Both patients had no difficulty in walking
• Hip Rom: normal
• NO h/o dislocation

CONCLUSION
• In conclusion, Ganz procedure is a relatively new procedure where Avascular necrosis of femur head can be avoided and the surgical dislocation done is safe without compromising the vascular supply of femoral head.

REFERENCE:
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