Avascular Necrosis of the Femoral Head Following Posterior Hip Dislocation with Acetabular Fracture in Young Adult - A Case Report

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INTRODUCTION:

Hip dislocation is an orthopaedic emergency caused by high-energy trauma commonly associated with acetabular fractures. Early hip reduction with anatomical fixation of the fractured acetabulum is mandatory to restore hip stability and to reduce risk of avascular necrosis (AVN) of femoral head.

REPORT:

A 37-years old patient presented to emergency department with inability to bear weight following a motor vehicle accident. Clinical examination and plain radiographs revealed right hip posterior dislocation with posterior acetabular wall fracture (Fig.1). Closed reduction was performed within two hours post trauma.

A week later, posterior acetabular wall was fixed with non-locking reconstruction plates and cortical screws. Patient was clinically well and discharged after one year follow up.

One year later, patient presented with persistent right hip pain and antalgic gait. Pelvic radiograph showed complete resorption of right femoral head. A cemented total hip arthroplasty was performed via the Hardinge approach. Serial x-rays showed no osteolysis or subsidence of femoral component (Fig 2).







Figure 3: Right total hip replacement prosthesis

CONCLUSION:

The primary cause of AVN in this patient is trauma [1]. In such cases open reduction is required [2]. Patients who have undergone reduction of dislocated hip and fixation of posterior acetabular wall alone should be closely monitored for AVN via serial radiological screening and longer duration of follow-up. Most importantly, patients should be primed for total hip arthroplasty to prevent delayed treatment in for hip AVN.

REFERENCES:

1. Anshul S, Kwang JO. Osteonecrosis of the Femoral Head in the Setting of a Complex Acetabulum Fracture without Hip Dislocation Treated Surgically Using Ilio-inguinal Approach. J Hip Pelvis. 2014; 26(3): 85-88.

2. S. Sanders, N. Tejwani. "Traumatic hip dislocation- Are view," Bulletin of the NYU Hospital for Joint Diseases, vol. 68, no. 2, pp. 91–96, 2010.