

**Percutaneous Extraction of Intra-Articular Posterior Wall Acetabular Fragment: Surgical Technique and Case Series**

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**Purpose:** Posterior wall fractures are the most common type of acetabular fracture. A relatively uncommon variant is the posterior rim fracture. This fragment can often be flipped into the joint during the reduction of a dislocated hip. The fragment becomes incarcerated between the femoral head and intact acetabulum. The fragments are often small enough that they do not contribute to hip joint stability; however, they cannot be left in the joint. The purpose of this report is to describe the technique to percutaneously remove the fragment from the joint to eliminate the morbidity of a Kocher-Langenbeck approach.

**Methods:** The patient is positioned supine on a radiolucent traction table. The hip joint is distracted. An incision is made at the posterior aspect of the tip of the greater trochanter. A tonsil is then directed into the joint. Using a combination of palpation and fluoroscopy, the tip of the tonsil is initially directed into the superior dome and then carefully maneuvered posterior and lateral to flip out the rim fragment. Traction is released to ensure a concentric hip joint. The reduction is then confirmed with either arthroscopy, intraoperative 3-dimensional imaging, or with postoperative CT. The hip joint is then stressed under fluoroscopy to ensure stability. Postoperatively, the patient is allowed to weight-bear as tolerated with assistive devices as needed and posterior hip precautions.

**Results:** This technique has been used five times in the past 5 years. In each case, the patient presented with a dislocated hip that was reduced in the emergency department. After reduction, a CT scan was obtained that revealed the incarcerated posterior wall rim fracture. The above operative technique was then used to remove the fragment from the joint. The described technique was successful each time. There were no instances of conversion to an open approach. At most recent follow up (average 2 years), each patient was doing well with minimal to no hip pain and no evidence of radiographic progression of arthritis.

**Conclusion:** Posterior wall acetabular rim fractures represent a small minority of acetabular fractures. When incarcerated in the joint, they must be removed. These can be treated with a percutaneous technique, saving the patient the morbidity of a Kocher-Langenbeck approach.