Superior Pubic Ramus Screw Fixation in Revision Total Hip Arthroplasty for Acetabular Bone Loss

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In patients with acetabular bone loss, especially those with associated chronic pelvic discontinuity, attaining inferior screw fixation is critical to avoid abduction failure of the acetabular component. Insertion of a superior pubic ramus screw may be indicated during revision total hip arthroplasty if ischial osteolysis is substantial, which precludes ischial fixation.

The patient is placed in the lateral decubitus position, and the acetabulum is exposed via a standard posterior approach. The location of the superior pubic root is identified after recessing the anteroinferior capsule. To ensure the appropriate trajectory is attained, C-arm imaging (inlet view and orthogonal obturator outlet views) is used to safely predrill the screw trajectory into the superior pubic ramus. A Kirschner wire is then placed into the drill hole, and the acetabular component is slid and impacted into place over the Kirschner wire. After cup insertion, the Kirschner wire is removed, and the superior pubic ramus screw is placed and confirmed on fluoroscopic imaging.

This video demonstrates a surgical technique that allows for safe and reproducible placement of a superior pubic ramus screw.