Ilioinguinal Approach in Acetabulum Fracture: Surgical Technique

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Introduction

The ilioinguinal approach was described by Dr. Emile Letournel. It provides access to the entire inner aspect of the iliac crest as far posteriorly as the sacroiliac joint and the anterior aspect of the acetabulum distal to the iliopectineal eminence. The ilioinguinal approach is indicated for anterior wall fractures, anterior column fractures, anterior wall/column with posterior hemitransverse fractures, and both-column and transverse or T-type fractures in which rotation and displacement of the transverse limb is anterior. Because dissection is required around the critical neurovascular structures with which orthopaedic surgeons are not very familiar, this video discusses the surgical technique.

Material and Methods

A total of 37 patients (21 males, 16 females) were included in the study. Bicolumnar fractures were observed in 12 patients, anterior wall with anterior column fractures were observed in five patients, anterior column with posterior hemitransverse fractures were observed in 10 patients, transverse fractures were observed in five patients, and T-type fractures were observed in five patients.

Results

The mean patient age was 37.6 years (range, 19 to 68 years), and mean follow-up was 3.7 years (range, 2 to 6 years). Mean intraoperative time was 237 minutes (range, 215 to 317 minutes). The mean Modified Merle d'Aubigné Score was 16.5 (range, 14 to 18). Complications included superficial infection in seven patients, deep infection in one patient, external iliac artery thrombosis in two patients, lateral femoral cutaneous nerve of the thigh injury in 20 patients, and secondary osteoarthritis in three patients.

Discussion

The advantages of the ilioinguinal approach include wide exposure with relative ease of reduction. This single extensile approach aids in reducing posterior column fractures, even as many as 3 weeks postinjury, and it is advantageous in delayed reduction of acetabular fractures. This direct, over-the-top salvage approach affords better visualization of the anterior wall/column. Disadvantages include lateral femoral cutaneous nerve injury, thrombosis/injury of the external iliac vessels, corona mortis injury, extensive scarring, and a steep learning curve.

Summary and Conclusion

The ilioinguinal approach is a versatile approach that affords wide exposure, with good to excellent results in most patients (85%).