

The Use of the Fracture Table Post for Guidewire Placement in Hip Fracture Surgery

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Purpose: Ideally, hip fractures are treated with a single attempt at guidewire placement into the center of the femoral head. Proper guidewire placement minimizes postoperative complications. The trajectory for guidewire placement on anterior fluoroscopy of the hip is easily determined, while the proper trajectory for optimal wire placement on the lateral view is more difficult. The purpose of this paper is to present a technique using the fluoroscopic image of the fracture table post (black dashes, Fig. 1) to determine the angle for wire placement into the center of the femoral head on the lateral view.

Methods: An anatomic reduction is obtained on the fracture table with traction and rotation. On the lateral image of the hip, an angle is formed between a line drawn along the axis of the femoral neck transecting the center of the femoral head (red line) and a line perpendicular to the fracture table post (yellow line), thus creating the “version angle” (Fig. 1). As the line perpendicular to the post is parallel to the floor (blue line), the defined version angle defines the proper angle for guidewire placement into the center of the femoral head on the lateral view relative to the floor.

Results: Reduction maneuvers including rotation of the extremity as well as the position of the patient on the operating table lead to changes in version of the hip relative to the floor. Defining the version angle intraoperatively allows for the determination of the angle (relative to the floor) for wire placement into the center of the femoral head on the lateral fluoroscopic view. This simple technique results in decreased failed guidewire passes into the femoral head thereby reducing operative time and possibly decreasing postoperative complications associated with unused guidewire holes from failed attempts.

Conclusion: The use of the fracture table post intraoperatively to obtain the version angle is a simple technical trick to optimize guidewire placement in hip fracture surgery.

