New Techniques and Emerging Evidence #NT2

Clinical Cases, Solutions, and Novel Techniques

Anterior Column Imaging of the Pelvis in the Lateral Decubitus Position: Surgical Setup and C-Arm Utilization for Safe Screw Placement

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Purpose: Imaging acetabular corridors in the supine and prone positions has been well described, but imaging in the lateral position is thought to be more difficult due to limitations in C-arm positioning. This case series provides technical guidance for obtaining accurate imaging of the anterior column while in the lateral decubitus position.

Methods: A detailed technique including patient and fluoroscopic positioning is provided to obtain standard obturator outlet and iliac inlet views of the acetabulum. Proof of concept is provided through a case series of 10 patients with various body habitus and fracture types.

Results: Ten patients were included in the case series with a mean body mass index (BMI) of 31 kg/m2 (range, 19-57). Fracture types consisted of transverse posterior wall (n = 5), T-type (n = 3), and transverse (n = 2). Standard obturator oblique and iliac inlet images were obtained independent of BMI and fracture type. Anterior column screws were successfully placed using the imaging method described and screw position was confirmed on postoperative imaging.

Conclusion: The case series provides technical guidance for obtaining safe and accurate imaging of the anterior column while in the lateral decubitus position. The ability to obtain proper imaging in the lateral position will provide surgeons with an additional skill set for their armamentarium when treating acetabular fractures.