

Extended lateral window approach for surgical fixation of high anterior column acetabular fractures

Background: Anterior column fractures of the acetabulum, although less common, often necessitate surgical fixation due to significant displacement or compromised hip stability. Traditional approaches to treating high anterior column fractures typically involve an ilioinguinal or modified Stoppa approach as the standard of care. Both allow for enhanced access the anterior column and anterior pelvic brim, but major disadvantages include potential injury to the external iliac neurovascular bundle, inguinal canal and bladder. The purpose of this investigation is to present a novel surgical approach to the pelvis, the extended lateral window, which allows for adequate reduction and osteosynthesis of high anterior column acetabular fractures while simultaneously remaining safer and less invasive than current standard approaches.

Methods: Six cadaver specimens were obtained. A standard ilioinguinal approach with a lateral window was made and the major bony landmarks along the anterior column were identified. The anterior most aspect of exposure along the anterior column was quantified radiographically using AP and Judet views. This was then compared to specimens with the extended lateral window approach.

Results: Specimens with the extended lateral window approach allowed for more anterior exposure in relation to defined bony landmarks in comparison to the lateral window of an ilioinguinal approach. The extended lateral window also afforded sufficient access to landmarks of the high anterior column traditionally achieved only with intrapelvic portions of standard approaches.

Conclusions: The extended lateral window approach safely allows sufficient exposure for the reduction and fixation of high anterior column fractures of the acetabulum and should be used in consideration along with the current standard anterior approaches.