

MODIFIED SUPRA-ACETABULAR EXTERNAL FIXATION FOR INITIAL MANAGEMENT OF PELVIC RING INJURY: A CASE REPORT

Sree Raja Lakshmy Chandra Sekaran¹, Darshan Kumar¹

¹Hospital Shah Alam

Introduction: High-energy pelvic fractures often results in mechanical instability of pelvic ring. Several methods of supra-acetabular external fixation were described previously. We described a modified way of supra-acetabular pin application in our patients with pelvic ring fracture without fluoroscopic guidance.

Discussion: Presenting a 32-years-old gentleman involved in a high impact trauma, hemodynamically unstable. His plain radiography of the pelvis showed, open book fracture. Patient underwent supra-acetabular external fixator for stabilization. During the procedure, anterior superior spine (ASIS) palpated, incision made 2cm inferior-medial to ASIS. A Schanz-pin diameter 5mm(50mm thread) was inserted perpendicularly to the body, 20-30°internal oblique, directed towards the greater sciatic notch. Only single cortex purchased and procedure was done without fluoroscopic guidance. Post operatively, patient was able to sit up to 90°. -Pelvic external fixation is an integral part of early resuscitation for unstable pelvic fracture. In traditional pelvic external fixation, incision made along the Langer lines extending medially guided by fluoroscopy. The Schanz-pin is inserted superior to the AIIIS angled towards the sacroiliac-joint approximately 30°medially and 20° cranially towards the posterior superior iliac spine which often tends to impinge the soft tissue of the anterior thigh upon sitting up 90°. A more perpendicular placement of pin with 20-30° of internal oblique angulation reduces soft tissue impingement and risk of pin to penetrate the iliac bone outer cortex. The short threaded pin (50-60mm) used engages the cortex until the dense bone of the sciatic buttress by turning without excessive force allowing the pin to be guided between the cortex. For assurance for pin insertion, a k-wire is placed parallel and in line with the inner table of the ASIS to provide the estimation of the iliac contour.

Conclusion: The modified supra-acetabular pin insertion placement has been used successfully, allowing easier application of external fixation without fluoroscopic guidance in a low resource setting.