

Unstable Pelvic Ring Fractures: From Bleeding Control to Bone Repair Along the Trauma Pathway

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ABSTRACT

Unstable pelvic ring fractures pose significant clinical challenges due to their intricate anatomy, substantial bleeding risk and frequent involvement of multiple organ systems. In the prehospital setting, early haemorrhage control with pre-peritoneal pelvic packing (PPP) and angioembolisation (AE) is critical: PPP rapidly controls venous bleeding, while AE targets arterial sources. Following initial resuscitation, timely bone repair with temporary external fixation (ExFix) and definitive bone repair, with open reduction and internal fixation (ORIF), is vital in minimising long-term complications. Hence, to coordinate these approaches from prehospital care to surgical intervention, a multidisciplinary approach is required along the trauma pathway. Advancements in trauma network systems may also offer improvements in survival and functional recovery. Therefore, this literature review critically evaluates the indications, timing and synergistic use of PPP, AE, ExFix and ORIF to optimise outcomes for patients with unstable pelvic ring fractures.

Keywords: pelvic bleeding, pelvic fracture, pelvic ring, trauma