

Continuous Compression Implant-Assisted Reduction and Orthogonal Fixation for APC Pelvic Ring Injuries: A Novel Use for a Time-Tested Implant

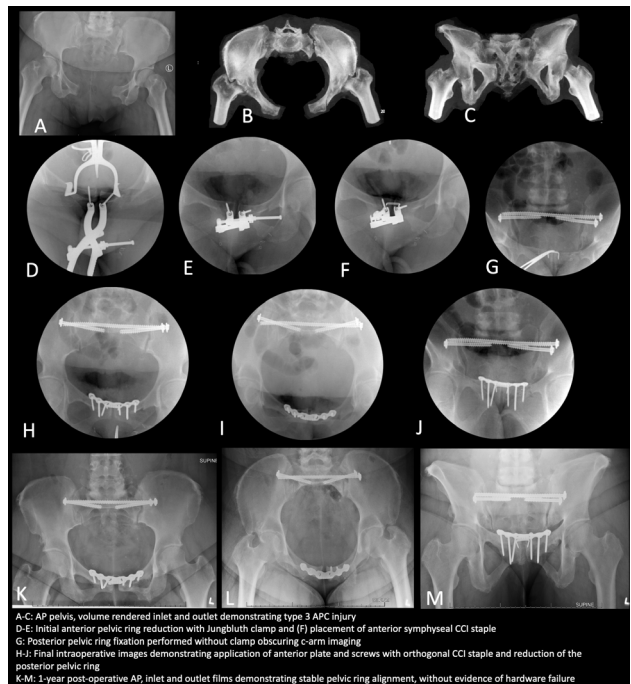
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Purpose: Symphyseal disruptions in APC (anteroposterior compression) type 2 and 3 pelvic ring injuries are typically secondary to high-energy trauma. These injuries commonly require anterior fixation of the pelvis to achieve stability and decrease the likelihood of implant failure and poor outcomes. In an effort to accurately and effectively reduce the anterior pelvic ring and provide orthogonal stability with minimal rectus abdominus soft-tissue stripping, we present a technical trick that has been utilized in a small series of patients who underwent continuous compression implant-assisted reduction of the pubic symphysis prior to plate and screw fixation for APC type 2 and type 3 injuries.

Methods: This technique is commonly utilized as the standard-of-care treatment for these injuries. Patients undergo a standard anterior approach to the pubic symphysis. A Weber or Jungbluth clamp is utilized to reduce the anterior pelvic ring and a 2- or 4-prong 20-mm bridge x 15-mm leg CCI (continuous compression implant) staple is placed along the anterior pubis bridging the symphysis. This allows for minimal anterior soft-tissue stripping, preliminary reduction clamp removal, and improved fluoroscopic visualization of the posterior pelvic ring for possible percutaneous fixation. Additionally, this method of flexible provisional fixation allows for fine-tuning of the posterior ring reduction. Further benefits include orthogonal (90/90) symphyseal fixation after a superior-based plate and screws are placed, conferring additional stability.

Results: 24 patients underwent open treatment of acute APC ring injuries. No patients were deceased at last follow-up. No revision surgeries were required for loss of fixation. All patients had fracture union at their final follow-up and were without pain related to their pelvic ring injury.

Conclusion: CCI-assisted reduction and orthogonal fixation for APC pelvic ring injuries with a continuous compression staple appears to be a reasonable strategy to increase anterior pelvic ring stability in addition to internal fixation.



TECHNICAL TRICKS AND TIPS

See the meeting app for complete listing of authors' disclosure information. Schedule and presenters subject to change.