

## **Synchronous Cerclage Wiring and Intramedullary Nailing for Unstable Femoral Fractures: Revisiting the Dead Bone Sandwich**

*Joshua McIntyre, MRCSEd; Jeswant R.V. Bashyam, MBBS; Liam Yapp, MBChB; Jamie A. Nicholson, MBChB; Samuel Molyneux, FRCS (Ortho)*  
*Royal Infirmary of Edinburgh, Edinburgh, United Kingdom*

**Purpose:** Unstable femoral fractures occasionally mandate open reduction to facilitate cortical alignment prior to intramedullary nailing. Although cerclage wires can support fracture reduction, their use when combined with reamed nailing has been traditionally associated with increased risk of periosteal stripping and impaired fracture healing. Our unit has employed this technique in select cases and anecdotally has not observed complications. The aim of this study was to describe our technique and assess the safety of intramedullary femoral nailing in combination with synchronous open cerclage wiring.

**Methods:** A consecutive series of patients who underwent cerclage wiring and intramedullary femoral nailing were identified over a 6-year period from a prospectively gathered database. Patient demographics and complications were identified with a retrospective review of patient notes. All patients were a minimum of 1 year postoperation at time of analysis.

**Results:** 50 consecutive patients were identified with a mean age of 74 years (standard deviation 15.4). Operations were undertaken by 10 consultant surgeons. The femoral fracture location was 38 subtrochanteric, 3 diaphyseal, and 9 distal. 8 patients died within 1 year of surgery. There were no cases of postoperative infection or further surgery for loss of fracture reduction. There was one case of delayed union, but this united without further intervention. 29 patients had serial radiological follow-up and the remainder did not represent.

**Conclusion:** Synchronous intramedullary nailing with cerclage wiring of unstable fracture patterns appears to be a useful technique to maintain fracture reduction without an increased risk of postoperative complications.