

FIXING AN UNCOMMON COMPLICATION OF A COMMON PROCEDURE: INTRAPELVIC GUIDEWIRE MIGRATION IN FEMORAL NECK OSTEOSYNTHESIS

Nicholas Aw Shao Jiun¹, Noradila Ishak², Mohd Firdaus Hafni Ahmad³, Zulkiflee Osman³

¹Universiti Kebangsaan Malaysia Medical Centre, ²Hospital Kuala Lumpur, ³Hospital Pulau Pinang

Introduction: Hip fracture osteosynthesis using cannulated devices is a common core orthopaedic procedure. There is a danger of intrapelvic guidewire migration intraoperatively—a complication involving pelvic viscera perforation[1-3] with resultant serious morbidity and mortality[4].

Discussion: A 49 year-old gentleman with Garden II left femur neck fracture underwent screw fixation. Initial guidewire placement was uneventful. However, first cannulated screw insertion revealed an unintended trans-acetabular intrapelvic guidewire migration. The proximal guidewire end was radiographically and directly visualized, buried at its entry point. General surgical was alerted in the event of haemodynamic instability from intra-abdominal injury. Fortunately, no acute complication occurred. The migrated guidewire was successfully retrieved via the initial surgical incision. Since the tip was embedded in the femoral cortex, multiple adjacent shallow drill holes permitted a plier head to fit for a secure grasp allowing guidewire retraction. Post-operatively, urgent CECT pelvis confirmed no intra-abdominal injury. In the literature, migrated guidewire removal during hip fracture fixation, depending on guidewire malposition or condition (broken etc.), has required opening of the hip joint; or involvement of other surgical specialties in removal using the abdominal approach, either via laparotomy, laparoscopically, or ilioinguinally. Our method for intrapelvic migrated guidewire removal is the first we know of in the literature. Prevention being better than cure, we suggest keeping the protruding guidewire free-end long, easing removal and reducing migration; single use guidewires ensuring sharpness; reduced reliance on blind insertion; frequent fluoroscopic visualization, both anterior and lateral projections; chiefly, instrument pre-usage inspection; and debris removal.[5,6]

Conclusion: The surgeon's rare nightmare[1-4,5] of intrapelvic guidewire migration during cannulated screw hip osteosynthesis can be overcome and more crucially, be prevented with sufficient preparation.