

Perforation of pelvic iliac artery by hip pins

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During reoperation for nonunion of a cervical hip fracture, a profuse arterial bleeding from the pelvis occurred, which was due to perforation of the iliac vessels by the Olmed screws.

Case report

A 90-year-old woman was operated on for a displaced right cervical hip fracture with two Olmed screws (Rehnberg and Olerud 1989) in November 1988. A good reduction and screw position were achieved (Figure 1). One year after the operation, she was readmitted because of increasing and disabling pain in the right hip, with first onset 6 months postoperatively; she could no longer walk or stand. Nonunion of the fracture was found, and the pins had migrated through the acetabular wall into the pelvis. A hemiarthroplasty was scheduled.

An anterolateral approach to the hip was used. When incising the joint capsule, a sudden profuse arterial bleeding (approx. 1 liter) occurred, originating from the pelvis through a perforation in the acetabulum caused by the Olmed screws, which had migrated and perforated several branches of the right internal iliac artery. Lower midline laparotomy was performed. In order to stop the bleeding, the right common and external iliac arteries were ligated and a femorofemoral cross-over bypass with Goretex graft was made to restore the

blood supply to the right lower limb. The patient received about 15 units of blood intraoperatively and 8 units postoperatively. Postoperatively, she had transitory respiratory distress, but recovered and ended up with a Girdlestone hip.

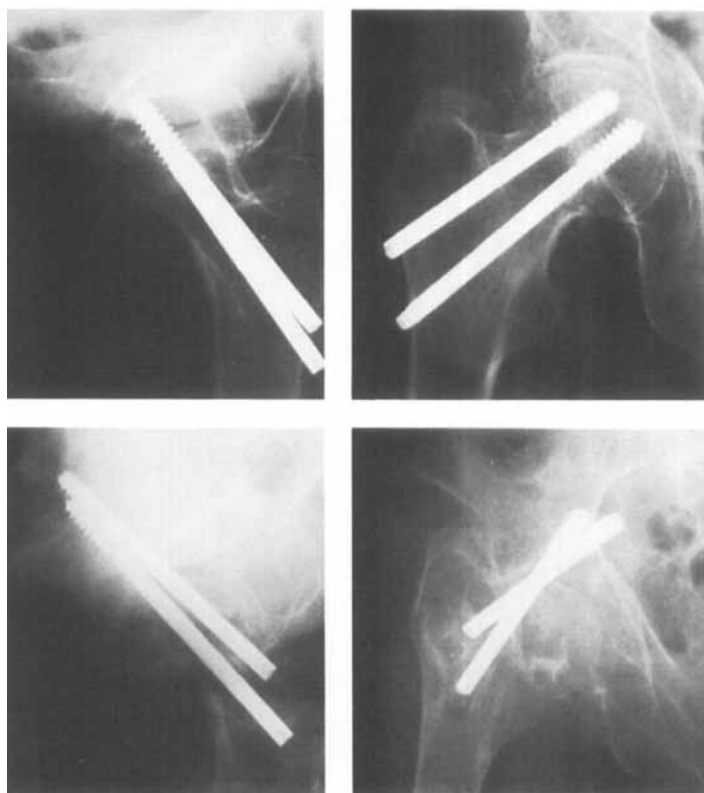


Figure 1. Immediate (upper) and 1-year (lower) postoperative lateral and frontal projections of the right hip.

Discussion

Migration of hip pins and screws into the pelvis (Brodell and Leve 1983, Joseph 1986) may cause a vascular injury (Posman and Morawa 1985). The Olmed screws are self-tapping, with three sharp tips formed by the thread and the cannula; and there is an occasional risk of perforation through the femoral head (Rehnberg 1988). In our case, the migrating pins had probably been closely related to pelvic blood vessels for some time because the bleeding occurred before the femoral head and pins were removed.

References

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