DELAYED RUPTURE OF FALSE ANEURYSM FOLLOWING A FEMORAL FRACTURE

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We report a case of a conservatively treated mid-shaft femoral fracture complicated by the rupture of a false aneurysm of the superficial femoral artery.

Case report. An 83-year-old woman, who had had an Exeter total hip replacement three years earlier, fell and sustained a spiral fracture of her right femur, just below the tip of the prosthesis. In view of the presence of the implant, she was treated conservatively with Hamilton Russell traction. At five weeks, when there were clinical signs of union occurring, her traction was changed to Perkins traction. At that time, she became anaemic (haemoglobin 6.9 g/dl), and the right leg became swollen. In view of her past treatment with non-steroidal anti-inflammatory drugs her anaemia was presumed to be due to gastro-intestinal blood loss, though at endoscopy no source of bleeding was seen. She was transfused with three units of blood. Over the next three weeks she again became anaemic and required a further blood transfusion. Eight weeks after her injury she suddenly became severely shocked and her thigh more swollen. A compartment syndrome, with a complete sciatic nerve palsy, rapidly developed. Her posterior tibial and dorsalis pedis pulses remained palpable. Angiography revealed a false aneurysm of the superficial femoral artery, in association with a spike of the proximal fragment of the femoral fracture (Fig. 1). At operation a large quantity of blood clot was evacuated, the aneurysm was excised and a reversed saphenous vein by-pass graft fashioned. Internal fixation of the fracture was undertaken, after which she made a slow, but uneventful recovery.

Discussion. Arterial injuries complicating long bone fractures are well recognised (Drapanas et al 1970), though they generally result from penetration of the artery during internal fixation of the fracture (Linton 1964). Ahlgren and Eklof (1981) described a case of false aneurysm of the popliteal artery due to penetration of the vessel by a bone spike from a distal femoral fracture. Most of the reported cases of vascular injury following femoral fractures have involved the deep femoral artery (Dickson 1968), or the popliteal artery (Rao and Lapilusa 1977). As far as we know ours is the first report of a false aneurysm of the superficial femoral artery following a closed fracture of the femoral shaft.

It seems likely that the arterial injury and subsequent formation of the false aneurysm in our case occurred at the time of the fracture, and that changing the traction coincided with rupture of the aneurysm. The aneurysm continued to leak intermittently over the next few weeks, until a major haemorrhagic event occurred, at the time of adjusting the traction.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

REFERENCES


