Superficial Femoral Artery Thrombosis After Midshaft Femoral Fixation With Intramedullary Nail: An Unusual Case

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INTRODUCTION:

We report, a case presented with a midshaft femur fracture, treated by anterograde intramedullary nailing. The procedure was complicated by a superficial femoral thrombosis (SFA) at the level of the fracture site. Excessive traction and trajectory of drilling for a 3 month old fracture might have put at risk the superficial femoral artery during the procedure.

REPORT

A 75-year-old female presented with right lower limb deformity following a motor vehicle accident approximately 3 months prior to admission with limb deformity and intact neurovascular. X-ray showed fracture of the right midshaft femur with presence of abundant of callus with mal alignment of the fracture (Figure 1).

An intramedullary nailing procedure was performed on day 98th of trauma on a fracture table in supine position. Post-operatively, the distal pulses were diminished and ankle and toe dorsiflexors were observed to be weak with reduced sensation over the dorsum of the foot. Angiographic study confirmed absence of blood flow beyond the fracture site on the superficial femoral artery (Figure 2).

Femoral artery grafting with a saphenous vein graft was done immediately replacing 6cm of thrombosis (figure 3). Patient progressed well afterwards.

FIGURE 1 : PRE OP X-RAY

FIGURE 2: FILLING DEFECT

FIGURE 3: THROMBOSIS

CONCLUSION:

Excessive traction as in this case may prevent the vascular axis moving out of the way of lesion. Some patients the SFA is positioned close (<10mm) to the medial femur when the lower limb is positioned on internal rotation and adduction which could be the case in this patient during positioning on traction table or sharp SFA trauma is probably a consequence of drilling and traction, as the locking screw was of the right length.

REFERENCES:

1.Grimaldi, M., Courvoisier, A., Tonetti, J., Vouaillat, H., & Merloz, P. (2009). Superficial femoral artery injury by a locked intramedullary nail. *Orthopaedics & Traumatology: Surgery & Research*, *95*(5), 380-382.