Open surgery as a salvage tool to manage endovascular complication: a case report

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Abstract

Background: Cardiac angiography is a diagnostic tool for acute coronary syndrome. It is often performed via femoral artery or upper limb access. The most recent PCI data reveal an overall incidence of access site injury ranging between 2.1% and 6.6% when it is defined as a complication requiring procedural or surgical intervention or as bleeding requiring transfusion. It can become complicated by bleeding or hematoma 1.2–8.9%, pseudo aneurysm 1.1–7.7%, arteriovenous fistula 0.86%, dissection 0.42%, thrombosis 0.07–0.1%, that should be managed expeditiously. Arterial perforation can occur during any phase of percutaneous procedures, with injury resulting from wire manipulation, balloon angioplasty, or implantation and removal of endovascular devices. The incidence of iliac rupture is approximately 0.9% and mortality appears to be very low, although it may be underestimated.

The aim of the present study is to introduce open surgery as a limb salvage approach to manage endovascular complications.

Case presentation: A 50 y/o diabetic female who was undergone diagnostic coronary angiography from right femoral artery. After completion of angiography the intervention list noted dye extravasation from right external iliac artery and he decided to deploy a 10 mm stent graft there via right femoral artery.

1. Point of perforation and dye extravasation of iliac artery

2. Extract the sheet of femoral artery

To avoid opening the stent graft in the right femoral 6 F sheath, he extract the sheet and the stent graft was fired over the guide wire but unfortunately it went out of the femoral artery and caused common femoral artery occlusion distal to it. Upon vascular surgery consultation we immediately perform a right hockey stick incision and explore the right common and external iliac arteries and also explore the common femoral and SFA and DFA and control them.

3. Stent graft fired

4. Stent graft went out of femoral artery in operation

After that we do iliofemoral bypass with an 8 mm PTFE graft. After 6 months and one year follow up the patient has a good right lower extremity distal pulse.

Conclusion: Angiography related complication are usually managed via endovascular approaches although it is often straightforward but sometimes it mandate open surgery as a salvage after some endovascular efforts.

References:


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