

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 26

An 83-year-old woman with a history of recent major surgical operation of the gastrointestinal tract, presented to the emergency room with severe pain and a lump located at the palmar surface of her right wrist. The lump was of acute onset, pulsatile, and gradually expanding to reach 4 cm in diameter on admission. The overlying skin was ischemic and surrounding tissues were tender to palpation (fig. 1). The patient's right hand fingers had no signs of ischemia; capillary refill and skin temperature were similar to the left hand fingers. Ulnar pulse was symmetric in both hands.



Figure 1

Quiz: What is the most probable diagnosis?

Comment

Cannulation of a patient's peripheral artery allows for continuous blood pressure monitoring and serial arterial blood gas analysis. Complications include infection, thrombosis, hemorrhage, distal embolism, and formation of pseudo-aneurysms. No significant mortality is associated with these complications. As the radial artery is the most frequently cannulated peripheral artery, it is the most frequent site for the formation of pseudoaneurysms on the upper extremity. Higher incidence of radial artery pseudoaneurysm formation occurs in elders, in patients on hemodialysis, in hypotensive and coagulopathic patients. The duration of catheterisation and multiple cannulation attempts also increase the incidence of pseudo-aneurysms.

Apart from a pulsatile lump, symptoms can be caused by adjacent structure compression by the pseudoaneurysm expansion, especially nerve compression.

Compression, either under ultrasound guidance or not, might resolve smaller pseudoaneurysms. Percutaneous thrombin injection under ultrasound guidance has become the treatment of choice for embolization of

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iatrogenic pseudoaneurysm. Coil embolization is also reported in some cases. Surgical intervention is needed in complicated cases and in patients with failed conservative management. Options include ligation of the artery if distal circulation is not compromised, excision of the pseudoaneurysm, and anastomosis using patch graft. Before attempting surgical treatment, the Allen test should be used to exclude pathology in the limb circulation. The full restoration of the hand blood supply is important in children, to avoid retardation of limb growth.

In our case, the chosen treatment was excision of the pseudoaneurysm and ligation of the feeding artery. The Allen test was performed prior to surgery and it was negative. No complications occurred during the post-operative period.

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Diagnosis: Right radial artery pseudoaneurysm