

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 21

A 52-year-old female with a history of coronary artery disease, heart failure, arterial hypertension, diabetes mellitus and stage III chronic kidney disease (eGFR: 56 mL/min/1.73 m²) was admitted to our hospital due to a mass in her right groin with blood loss (fig. 1). Patient had undergone a femoral-popliteal bypass with the use of a synthetic graft because of critical ischemia of the right leg 2 months ago. Clinical examination revealed a bleeding pulsatile mass in the right groin and an ABI of 0.6. Blood analysis showed anemia (Ht=24.8%) and leukocytosis (WBC=12,550).

Quiz #1: What is the diagnosis and the proper management?

Comment

The color Duplex ultrasound examination showed a pseudoaneurysm of an 8-cm diameter of the right common femoral artery at the site of graft anastomosis with signs of old and new thrombus. Patient was operated urgently under general anesthesia. Right external iliac artery was exposed through an oblique, lower quadrant incision (Alexander's incision) with a retroperitoneal approach. When right external iliac artery was controlled, pseudoaneurysm was exposed through a longitudinal inguinal incision and thrombus was removed, so it was revealed that bleeding was from a dehiscence in anastomosis line. Extensive debridement and drainage of the area was performed and it was decided to perform an extra-anatomic bypass in order to restore blood flow to the limb.



Figure 1

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2012, 29(5):640–641

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With regards of avoiding placing a graft in the contaminated area of the groin, it was decided to perform a transobturator foramen bypass using a 7 mm-diameter ePTFE graft from external iliac artery to the femoral-popliteal graft close to the anastomosis of popliteal artery. Tunneling through obturator foramen was done with blunt dissection. Postoperative period was uneventful. Patient had an ABI=0.9. Culture from the groin area grew *Acinetobacter baumannii* and antibiotic therapy was administered. Postoperative arteriography showed a patent transobturator foramen bypass with no signs of stenosis or kinking (fig. 2). Patient was discharged on the 10th postoperative day.

Vascular infections are most commonly seen in the groin. Predisposing factors are surgical technique (division of lymphatic vessels, improper wound closure), proximity to perineum, transposition of infectious microorganisms from ulceration on the legs and the superficial location of vascular grafts in the groin.

Complications of vascular infections include hemorrhage, pseudoaneurysm formation, limb ischemia, septic embolization and systemic sepsis.

The basic principles of treatment of infected vascular prostheses

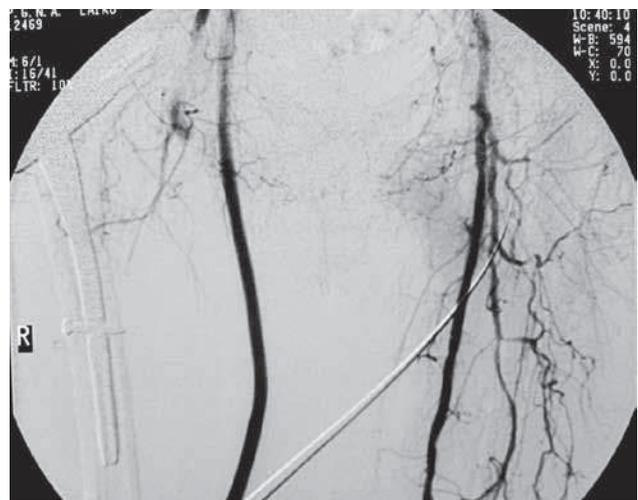


Figure 2

include the removal of all foreign materials, the drainage and debridement of infected area, the restoration of blood flow and antibiotics administration.

Bypass through obturator foramen was first performed by Shaw and Baue in 1953. It can be used in cases of infection of the groin because bypass is deep enough and far from the infection site.

Patency rates range from 66 to 89%, with a five-year patency rate 60%. Complications that have been reported after obturator bypass include bladder perforation, false aneurysm of the graft and injury of obturator vein or nerve.

Transobturator foramen bypass is an old-fashioned technique but vascular surgeons should be familiar with it because it could be proved useful in cases of infections of the groin.

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