

Image Diagnosis: Rapidly Enlarging Scrotal Hematoma: A Complication of Femoral Access?

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CASE PRESENTATION

A 69-year-old man with known ischemic cardiomyopathy presented to our Emergency Department with chest pain. He underwent cardiac catheterization via right femoral approach with placement of a drug-eluting stent to his mid left anterior descending artery, and dual antiplatelet therapy with aspirin and clopidogrel was started. Postintervention, the arteriotomy site was sealed using a Mynx (Cardinal-Health Inc, Dublin, OH) vascular closure device. No immediate postprocedure complications were noted. Overnight, the patient developed hypotension with penile swelling along with a progressively enlarging scrotal hematoma (Figure 1). No access site swelling or hematoma was evident. A computed tomography scan of the abdomen and pelvis showed soft tissue extending from the pelvis into the scrotum (Figure 2). The patient's baseline hemoglobin level before the procedure was 10.5 g/dL, and hematocrit was 32.2%. At the time the swelling was noted, the patient's hemoglobin had dropped to 7.5 g/dL, and hematocrit was down to 23.3%. He required transfusion of 2 units of packed red blood cells.

The next morning, because of a continued drop in hemoglobin and worsening scrotal swelling, the patient was taken urgently to the catheterization laboratory for right femoral angiography via left femoral approach. The femoral angiogram showed continued spurting of blood from the right common femoral artery access site (Figure 3), probably because of posterior wall puncture during cardiac catheterization. Percutaneous balloon angioplasty was performed using an 8 mm x 40 mm compliant balloon with prolonged inflation (more than 5 minutes) to tamponade



Figure 1. A photograph of the scrotal hematoma taken after cardiac catheterization. The patient is in the right lateral decubitus position.

the site of the posterior ooze. A subsequent angiogram showed no evidence of bleeding from the common femoral artery (Figure 4). An orthogonal-view angiogram was repeated a few minutes later with similar results.

During the next day, the patient's hemodynamic and hematologic parameters stabilized. There was gradual reduction in the scrotal swelling until complete resolution was confirmed at follow-up 2 weeks later.

DISCUSSION

Access site bleeding is an important complication of femoral access during cardiac catheterization. Causes of access site bleeding include multiple sticks, back wall stick, failure of the closure device, or residual bleeding from the initial site.^{1,2} The most dreaded manifestation of femoral access site bleeding is retroperitoneal hemorrhage presenting as hypotension, back/flank pain, and sequelae of acute blood loss anemia without any overt signs

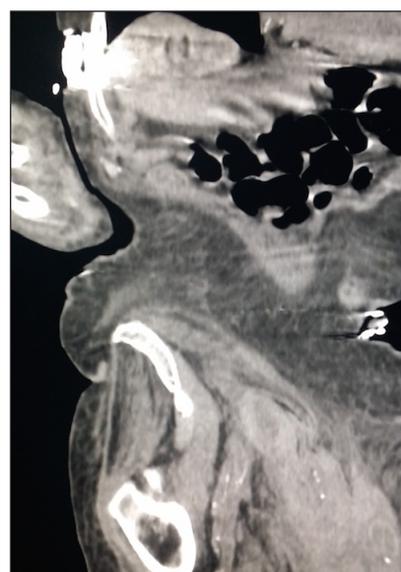


Figure 2. A coronal-view computed tomography scan of the abdomen and pelvis showing soft tissue extending from the pelvis into the scrotum via the inguinal canal.

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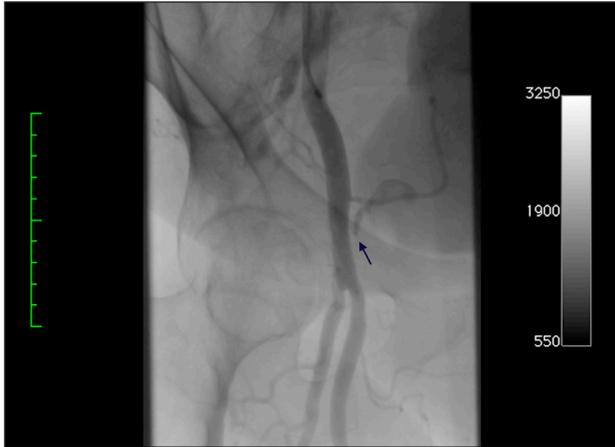


Figure 3. A femoral angiogram showing bleeding from the common femoral artery.



Figure 4. A postangioplasty femoral angiogram with no evidence of continued bleeding.

of bleeding. This manifestation can prolong hospital stay and in rare instances can be fatal. Access site bleeding for femoral access occurs in 0.82% of cases after percutaneous coronary intervention.¹ Retroperitoneal bleeding is the most catastrophic manifestation of access site bleeding, occurring in 0.29% of cases.³ A scrotal hematoma occurs when the stick is at or very close to the inguinal ligament, with blood tracking along the spermatic cord into the scrotum. To our knowledge, only a handful of cases of development of scrotal hematoma after femoral artery access have been reported in the literature.^{4,5} The incidence of bleeding complications has not been shown to be different whether a closure device is used or not.³

Diagnosis of retroperitoneal bleeding is made with abdominopelvic computed tomography.⁶ Ultrasound or computed tomography can provide the diagnosis for scrotal hematoma.⁶ Treatment of scrotal hematoma has ranged from conservative measures, including scrotal elevation and resuscitation with IV crystalloids or blood products, to open surgical options.⁴ Ultrasound-guided compression⁷ and ultrasound-guided thrombin injection⁸ are noninvasive measures that are effective for

femoral artery pseudoaneurysms, but these measures are unlikely to be effective for unrestrained obvious bleeding. Endovascular balloon tamponade is a minimally invasive option that is frequently successful⁹ and offers the option to use covered stents in case of failure.⁶ ❖

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

How to Cite this Article

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