Medical Image of the Week: Abdominal Hematoma

Figure 1. Contrast-enhanced CT abdomen/pelvis showing A) coronal and B) sagittal views of a LLQ hematoma (blue braces) with active contrast extravasation (red arrow). Lines represent the level of respective axial images. C-F) Axial images demonstrating the hematoma within and expanding the rectus abdominis sheath (blue braces) as well as active contrast leak (red arrow).

Figure 2. A) Arteriogram demonstrating the large hematoma (solid arrow) with active extravasation of contrast from the inferior epigastric artery (arrowhead) arising from the external iliac artery (empty arrow). B) Coils in the inferior epigastric artery (arrow) block flow to the hematoma.
A 59 year-old man presented to clinic with acute-on-chronic non-productive cough along with sore throat and myalgias for 2 weeks and lower left quadrant (LLQ) abdominal pain for 2-3 days. He was a current smoker with history significant for COPD and mild “smoker’s cough” controlled with daily anticholinergic and as-needed beta-agonist, paroxysmal atrial fibrillation on dabigatran and diltiazem, hypertension controlled by diuretic, and a former alcoholic with hemochromatosis.

While getting an x-ray, he had a coughing fit resulting in abrupt worsening of his LLQ pain enough to inhibit ambulation. Due to his inability to walk, he came via ambulance to the emergency department, where he was mildly tachycardic with a 10cm firm, tender and ecchymotic LLQ mass.

Contrast-enhanced abdominal/pelvic CT demonstrated a large rectus abdominis hematoma. Figure 1 shows the hematoma within the rectus sheath measuring 16 cm with active contrast extravasation. The patient went directly to the interventional suite, where the left inferior epigastric artery was catheterized and subsequently embolized as shown in Figure 2.

The patient was noted to be in atrial fibrillation with rapid ventricular response (AFRVR), so was taken to the intensive care unit and placed on diltiazem drip, given digoxin and 1 unit of RBCs before his rhythm stabilized and he was transferred to the floor. His hemoglobin remained stable, and his cough and abdominal pain improved, so he was sent home off anticoagulation until follow-up with his cardiologist.

In the RE-LY trial, updated in 2010 (1), there was no difference in bleeding complications at this patient’s dosing of dabigatran compared to warfarin with INR of 2.0-3.0. However, this patient did not bleed into a critical area, require 2 units of RBCs, nor drop hemoglobin >2mg/dl, and would thus be considered having a minor bleeding event despite needing emergent embolization, losing enough blood to become tachycardic with resulting AFRVR, and getting 1 unit of RBC.

Despite this particular bleeding complication, in a meta-analysis examining dabigatran vs warfarin, dabigatran uniformly was as good or better in preventing strokes with less devastating complications than warfarin (2). Additionally, although warfarin is touted as having vitamin K as its reversal agent, protein synthesis and secretion into the vasculature takes hours, similar in time to metabolically clear dabigatran (3).

In the end, after discussions about anticoagulants with the hospital team before discharge and his cardiologist thereafter, the patient elected to restart his dabigatran.

Michael Larson, M.D., Ph.D.
Banner-University Medical Center
University of Arizona
Medical Imaging Department
Tucson, AZ, USA
References

