

# Prevesical Space Hematoma in a Patient on Anticoagulation Therapy

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## Citation

M McCormack, J McClenathan. *Prevesical Space Hematoma in a Patient on Anticoagulation Therapy*. The Internet Journal of Surgery. 2008 Volume 21 Number 1.

## Abstract

In this article, we describe an anticoagulated patient who developed a large prevesical space hematoma while recovering from an acute respiratory illness. This diagnosis should be considered in the anticoagulated patient who develops abdominal pain, a lower abdominal wall mass and an anemic syndrome. Diagnosis is usually confirmed by CT scan or ultrasound. Non-operative management is recommended

A 67-year-old woman hospitalized for acute pulmonary failure of unknown etiology developed a one-day history of increasing lower abdominal pain and distension associated with new-onset tachycardia and hypotension. The patient was extubated one day prior to this development. She had been anticoagulated with subcutaneous low molecular weight heparin for deep venous thrombosis diagnosed during the same hospitalization, and only that day had been started on coumadin therapy. Laboratory values demonstrated a ten-point drop in hematocrit over the preceding twenty hours with an INR of 1.1.

Once the patient was stabilized, a CT (computerized tomography) scan of the abdomen was performed to determine the source of the bleeding. An 11 x 13 x 12cm fluid collection was identified anterior to the bladder, with fluid-fluid levels noted.

Figure 1



Additionally, the process extended cephalad along both rectus sheaths, measuring approximately 10 x 5cm on either side. Earlier in the day, the patient underwent ultrasound evaluation of the abdomen, as part of her workup for elevated liver enzymes found at the time of admission. While the biliary anatomy was unremarkable, an approximately 5 x 8cm fluid collection was noted anterior to the bladder catheter balloon at that time.

We treated the patient with non-operative management. Several transfusions of packed red blood cells were required to maintain an acceptable hemoglobin and hematocrit. Anticoagulation medications were held until all active bleeding had stopped and the patient had stabilized. She was eventually discharged from the hospital without additional

morbidity.

### **DISCUSSION**

Prevesical space and rectus sheath hematoma are rare but notable complications of anticoagulation therapy. (1) The sources of bleeding are often ruptured epigastric vessels or actual tears in the rectus muscle, and have been observed to be precipitated by a coughing fit. The clinical triad of abdominal pain, abdominal mass (frequently infra-umbilical), and anemic syndrome in a patient on anticoagulation therapy should raise suspicion of this entity. Interestingly, it is not wholly uncommon for the patient's coagulation parameters to be within normal limits.

Radiologic assessment is an important component in making the correct diagnosis. While ultrasound (US) might properly demonstrate the presence of an anterior pelvic mass, this modality may not provide a definitive diagnosis. Such hematomas visualized by US have shown varied patterns of echogenicity, lending credence to the presence of fluid components other than blood. Additionally, this process may even mimic the normal urinary bladder. (2) Computed tomography (CT) scans have proven to be the most sensitive modality of evaluating extraperitoneal space hematomas. As

demonstrated in this case, the prevesical space is contiguous with the rectus sheath and large hematomas arising there may spread within this plane. The hematocrit effect within the hematoma further aids in making the diagnosis.

While surgical intervention may eventually be indicated in severe cases of prevesical space hematoma, conservative management is preferred. This condition may, however, present similarly to an acute abdomen or intra-abdominal or pelvic hemorrhage, and may prompt unnecessary laparotomies. (3) Proper evaluation, including CT scan, can assist in making the correct diagnosis and avoidance of unnecessary procedures.

### **References**

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