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OCCULT SPLENIC RUPTURE PRESENTING AS ACUTE SCROTAL SWELLING

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□ **Abstract—Background: Scrotal pain and swelling is a common complaint encountered in emergency medicine. The differential diagnosis includes testicular, scrotal, and intra-abdominal pathology. Case Report: We present a case of an 80-year-old man on warfarin therapy presenting with acute atraumatic scrotal pain and swelling initially diagnosed as a hydrocele. The diagnosis was subsequently determined to be a communicating hematocele secondary to occult splenic rupture. Conclusion: Intra-abdominal pathology can result in scrotal pain and swelling due to passage of intra-abdominal contents into the scrotum via a patent processus vaginalis. Therefore, any cause of hemoperitoneum may also cause hematocele and hematocele should be considered in the differential diagnosis of acute scrotal swelling in any patient with risk factors for bleeding. In these patients, both scrotal and abdominal imaging should be considered.** © 2012 Elsevier Inc.

□ **Keywords—hematocele; spleen; hemoperitoneum; processus vaginalis; scrotum**

INTRODUCTION

Scrotal and testicular pain and swelling are complaints frequently encountered in emergency medicine and may be caused by either intrascrotal pathology or the passage of intra-abdominal contents into the scrotum. Etiologies vary from benign conditions such as hydrocele, varicocele, epididymal cysts, and hernias, to more urgent conditions including contusions, epididymitis, torsion of the appendix testes, tumors, and vasculitis, to true emergencies such as testicular torsion, testicular rupture, and Fournier's gangrene (1). Scrotal pain and swelling caused by acute communicating hematocele due to splenic rupture has been reported previously in the pediatric population, with a single case reported in an adult related to splenic trauma (2–8). We present a case of an 80-year-old man presenting with acute scrotal pain and swelling, ultimately diagnosed with a subacute communicating hematocele due to occult atraumatic splenic rupture.

CASE REPORT

An 80-year-old man with a past medical history of chronic obstructive pulmonary disease, hypothyroidism, squamous cell carcinoma of the true vocal cords, and atrial fibrillation presented to the Emergency Department (ED) with a chief complaint of 4 days of worsening right testicular swelling. His symptoms began 4 days prior when he presented to the ED for evaluation of the acute onset of pain and swelling in the right testicle accompanied by left lower quadrant abdominal pain. There was no history of scrotal or abdominal trauma. His medications included levothyroxine and warfarin. The examination at the time of his initial evaluation revealed an enlarged, tender, swollen right scrotum with no ecchymoses or signs of trauma. There was mild diffuse abdominal tenderness, bowel sounds were normal, and there was no guarding

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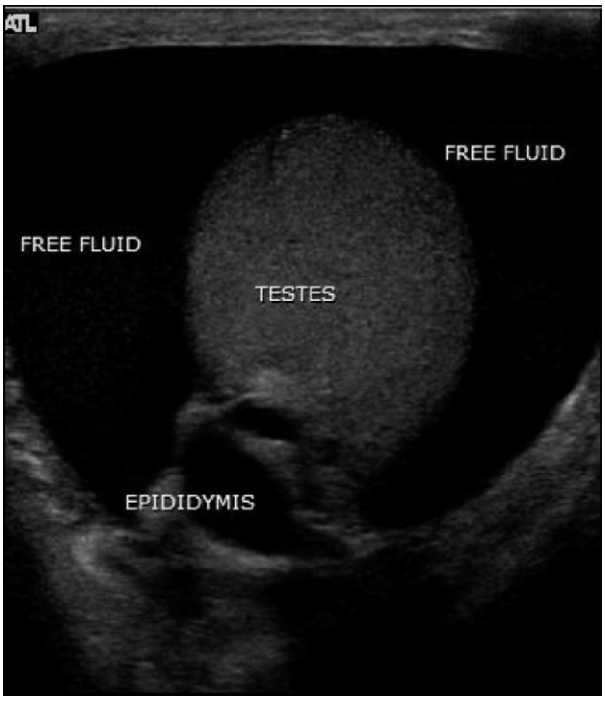

Figure 1. Scrotal ultrasound scan at first visit showing normal testes and epididymis surrounded by echolucent free fluid.

or rigidity and no costovertebral angle (CVA) tenderness. Laboratory data at that time included a white blood cell count (WBC) of 13.7 K with normal differential, hematocrit 36.9%, platelets 206,000, international normalized ratio (INR) 2.0, a normal urinalysis, and a scrotal ultrasound interpreted as a right-sided hydrocele with good testicular blood flow (Figure 1). He was discharged with a diagnosis of "right hydrocele" with next-day referral to Urology. The following day the patient was examined by the urologist, who again noted right scrotal swelling, but now with significant ecchymoses. The urologist felt the patient may have had minor local trauma causing scrotal bleeding due to his warfarin therapy, and discharged him with instructions to apply ice and elevate the scrotum. The current ED visit, now 4 days later, was precipitated by increasing swelling and ecchymoses of the scrotum with only mild pain, which he described as "uncomfortable." He reported no further abdominal pain. He did report, however, that at the time of his initial ED evaluation, he was also experiencing left flank pain radiating to the left shoulder, which was not documented in the original record. That pain had since resolved.

Physical examination revealed an obese elderly gentleman, comfortable-appearing, with a blood pressure of 141/91 mm Hg, pulse of 81 beats/min, respiratory rate of 18 breaths/min, oxygen saturation of 94% on room air, and an oral temperature of 37.0°C (98.8°F). The lungs were clear to auscultation and his cardiovascular examination revealed an irregularly irregular rhythm with a III/VI systolic murmur heard best at the left sternal border. His abdomen was obese, non-distended with normal active bowel sounds; mild tenderness was present to palpation of all four quadrants of the abdomen, but without guarding, rebound, or rigidity. The right aspect of the scrotum was markedly swollen, enlarged to "the size of a cantaloupe," with circumferential ecchymoses that extended into the penis. The left aspect of the scrotum was unaffected and the left testicle was palpable and non-tender. The back appeared normal with no ecchymoses, was non-tender to palpation and percussion, and there was no CVA tenderness. Skin was without petechiae and there was no edema or cyanosis in the extremities.

His review of systems was negative for any history of fevers, chills, nausea, vomiting, diarrhea, rash, shortness of breath, recent trauma or falls, or any history of hematuria, melena, hematochezia, or excessive bleeding.

His laboratory data now revealed a hematocrit of 29.8%, which had dropped from 36.9% 4 days prior and 45% at previous baseline. The prothrombin time was 22.9 s, partial thromboplastin time 53.4 s, and INR 1.9. WBC, differential, platelet count, and electrolytes were all within normal limits.

Due to the marked drop in hematocrit, the patient underwent emergent abdominal/pelvic computed tomography (CT) scan, which revealed a ruptured spleen (Figure 2) and free fluid only in the dependent portion of the pelvis (Figure 3). General Surgery was consulted and the patient was treated with immediate transfusion of fresh

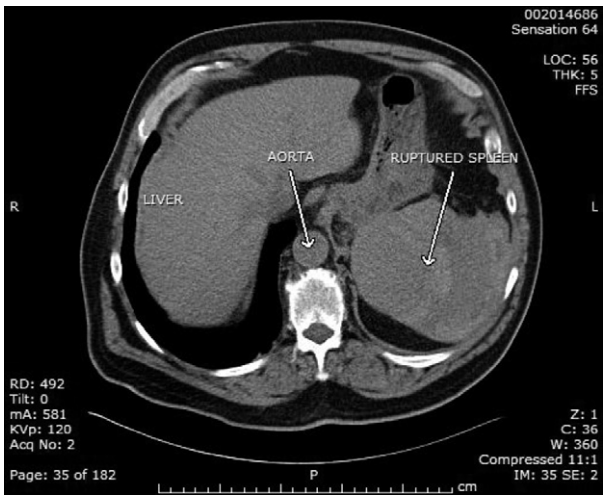

Figure 2. Abdominal CT scan at second visit showing ruptured spleen.