What Is Your Diagnosis?

**History**
A 6-year-old spayed female Great Dane was evaluated because of lethargy and signs of abdominal pain of 2 days’ duration. In addition, the dog was unable to stand. Physical examination revealed weak pulse quality and icterus. Signs of pain were elicited on palpation of a mass in the cranial abdominal region. A CBC, urinalysis, and serum biochemical analyses revealed mature neutrophilia (17.544 X 10³ cells/µl; reference range, 2.9 to 12.0 X 10³ cells/µl), hematuria, high serum alkaline phosphatase activity (319 U/L; reference range, 13 to 22 U/L), and hyperbilirubinemia (total bilirubin, 1.1 mg/dl; reference range, 0.0 to 0.2 mg/dl). Abdominal radiographs were obtained (Fig 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page.

---

**Figure 1**—Right lateral (A) and ventrodorsal (B) radiographic views of the caudal thoracic and cranial abdominal regions of a 6-year-old Great Dane evaluated because of lethargy, signs of abdominal pain, and an abdominal mass.
Diagnosis

Radiographic diagnosis—Soft-tissue opacity containing numerous gas pockets in the right cranioventral abdominal region (Fig 2).

Comments

The soft-tissue opacity was consistent with an enlarged spleen. This created a mass effect that displaced the small intestines caudodorsally. Differential diagnoses for splenomegaly include splenic torsion, splenic congestion, splenitis, and splenic neoplasia. The branching gas pattern within the soft-tissue opacity likely represented gas within splenic veins (Fig 2). A moderate loss of serosal surface detail was also noticed throughout the abdomen. This finding was consistent with free abdominal fluid. On the basis of clinical signs and radiographic abnormalities, our presumptive diagnosis was splenic torsion.

Common clinical signs of splenic torsion in dogs include signs of depression or lethargy, icterus, anorexia, and splenomegaly. Splenic torsion is especially prevalent in Great Danes and German Shepherd Dogs. Laboratory tests often reveal leukocytosis characterized by neutrophilia, high serum alkaline phosphatase activity, and hematuria or hemoglobinuria. Radiographic signs of splenic torsion include splenomegaly, decreased abdominal detail, displacement of the small intestine, change in splenic shape or location, and splenic gas.

Splenic ultrasonography has been used to confirm splenic torsion in dogs. Typical findings include splenomegaly and diffuse hypoechochogenicity with linear echodensities separating large anechoic areas. However, we did not believe that further diagnostic imaging was necessary for the dog described in this report. Instead, splenic torsion was confirmed during emergency laparotomy, and a splenectomy was performed. Bacteriologic culture of biopsy specimens revealed gram-positive rods, consistent with Clostridium spp. The dog was treated with cefotetan (20 mg/kg [9.1 mg/lb], IV, q 8 h for 5 days) and was released from the hospital 5 days after surgery. Seven days later, the owners reported that the dog appeared healthy.


This report was submitted by Ryan G. P. King, BSc, and LeeAnn Pack, DVM, from the Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PEI, Canada C1A 4P3 (King); and the Department of Anatomy and Radiology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602 (Pack). Dr. Pack’s present address is the Department of Companion Animals, Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PEI, Canada C1A 4P3. Mr. King was a fourth-year veterinary student at the time of submission of this report.