What Is Your Diagnosis?

**History**

A 4-year-old spayed female Labrador Retriever was referred because of a 1-week history of inappetence and dyspnea when lying on its right side. According to the owner, these signs were progressive and were accompanied by gagging and spontaneous coughing. Vaccinations were current and the dog was on heartworm preventative.

On physical examination, heart and lung sounds were decreased on the left side. There was also mild to moderate generalized muscle wasting. Serum biochemical analyses, a CBC, and thoracic radiography were performed (Fig 1).

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

---

This report was submitted by Van W. Knox IV, VMD; Garrett J. Davis, DVM; and H. Mark Saunders, VMD, MS, DACVR; from the Sections of Radiology and Surgery, Department of Clinical Studies, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA 19104. The authors thank Drs. Alisa L. Newton and Sionagh H. Smith for technical assistance.
Diagnosis

Radiographic diagnosis—Large mass in the left caudal portion of the thorax, with cranial displacement of the left cranial lung lobe and pleural effusion (Fig 2).

Comments

The initial differential diagnoses included an extrapleural mass arising from the left thoracic wall or costal pleura and left caudal pulmonary mass (neoplasia, abscess, or granuloma); other less likely diagnoses included lung lobe torsion with abscess, hematoma secondary to trauma, and diaphragmatic hernia.

Ultrasonography revealed a large mixed-echoic mass, with possible thoracic wall attachment at the left eighth intercostal space. This mass appeared to move independently of the thoracic wall with respiration. The caudal portion of the mass was cavitated and filled with echogenic material. Large blood vessels in the mass appeared to converge at the hilus. Minimal pleural effusion and sternal lymphadenopathy were seen.

On the basis of ultrasonographic findings, the mass was considered to be extrapleural or pulmonary in origin. Possible attachment to the left thoracic wall indicated thoracic wall or costal pleural origin; movement of the mass independent of the thoracic wall and convergence of blood vessels at the hilus were more compatible with pulmonary origin. Cavitation of the mass would be seen with neoplasia, abscess, or granuloma.

At surgery, a 20-cm-diameter mass arising from the left thoracic wall was resected. The histologic diagnosis was undifferentiated sarcoma, most likely a fibrosarcoma. Less than 2 months later, the dog developed respiratory distress and was euthanized. Necropsy revealed regrowth of the neoplasia and hemothorax.

References