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What's Your Diagnosis?

E.A. Riedesel, DVM*

History:
An 11 year old, castrated male, Siberian Husky presented for evaluation of "twitching". Past history included removal of an apocrine adenocarcinoma from the left hind leg two years previously.

Physical exam and clinical evaluation:
The physical exam was unremarkable except for a small mass on the upper left eyelid. Clinical pathology data was consistent with chronic liver disease. Thoracic radiographs (Figures 1 and 2) were done as part of the data base.

Radiographic findings:
A circular solid radiopacity approximately 2 cm in diameter was identified in the dorsoventral view. It was located to the right of the spine at the plane of the right 6th rib. This opacity could not be seen in the right lateral recumbant view. The dog was then radiographed in left lateral recumbancy (Figure 3) using the same radiographic technique as used for the right lateral view. The radiopacity was easily seen between the trachea and aorta ventral to the plane of the 5th thoracic vertebra.

Radiographic diagnosis:
A differential diagnosis of metastatic pulmonary neoplasia, abscess, singular granuloma, or primary pulmonary neoplasia was made for the focal mass. Subsequent radiographic re-evaluation was recommended to assess any change in size.

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Figure 1: Right lateral recumbant view of 11 year old CM Siberian Husky.
Discussion:
Soft tissue dense structures, including blood vessels, are seen within the lung only when there is sufficient air contrast around them. The dependent lung of recumbant animals undergoes varying degrees of atelectasis and increased regional pulmonary blood flow.(1) The resulting decreased aeration can obscure the edges of infiltrated areas in the lung making them non-visualized. Placing the animal in the opposite lateral recumbent positioning allows the atelectatic lung to reinflate and reestablishes the air contrast around the infiltrated areas. This tends to occur most frequently with lesions in the right cranial and middle lung lobes and in the left cranial lung lobe when filmed in right lateral recumbancy and left lateral recumbancy respectively. Therefore, suspected pulmonary lesions seen on the dorsoventral view but not seen in the lateral view should be additionally evaluated with a contralateral view. Some disease conditions which may benefit from this additional radiographic evaluation are pneumonia, primary or metastatic neoplasia, pulmonary hemorrhage, and cavitary lesions.(1)

Reference:

Figure 2: Dorsoventral view of 11 year old CM Siberian Husky. A focal, circular solid radiopacity is seen to the right of the spine at the plane of the 6th rib.

Figure 3: Left lateral recumbant view of the same dog showing a clearly seen solid radiopacity (arrows) dorsal to the bifurcation of the mainstem bronchi.