

What's Your Radiographic Diagnosis?

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History

A 9-month-old male German Shepherd dog was examined for decreased exercise tolerance, enlargement of the abdomen, and groaning when forced to move. The signs developed over a 3 week period. Auscultation of the thorax revealed muffled heart sounds. The EKG recordings had markedly decreased amplitude, with intermittent premature ventricular contractions.

Laboratory finding included Hb 13.2 mg/dl, PCV 37%, WBC 18,000/mm³, leptocytes, anisocytosis, and polychromasia. The plasma protein level was 4.7 mg/dl.

Thoracic radiographs were taken (Fig. 1).

Radiographic Diagnosis

The abdomen is grossly distended, its

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“ground glass” appearance indicating peritoneal fluid. The diaphragm is displaced cranially due to the ascites.

The heart shadow is enlarged and rounded, with a “soccer ball” shape. The preliminary radiographic diagnosis is pericardial fluid. Other differential diagnoses would include ventricular dilatation secondary to cardiomyopathy or a pericardioperitoneal diaphragmatic hernia.

Comments

Four hundred ml of bloody fluid were aspirated from the pericardium. The fluid contained red cells and neutrophils in large numbers; bacteriological cultures were negative. The fluid resulted from chronic hemorrhage into the pericardium. The dog improved dramatically for 3 days after fluid removal; heart sounds were less muffled and the ascites diminished. The arrhythmia persisted.

Two days later signs began to reoccur and an additional 200 ml of pericardial fluid were

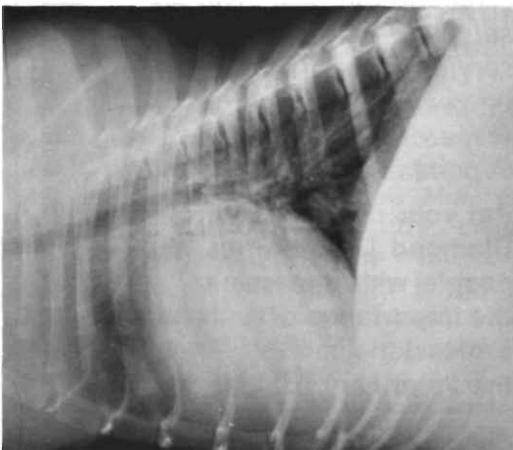


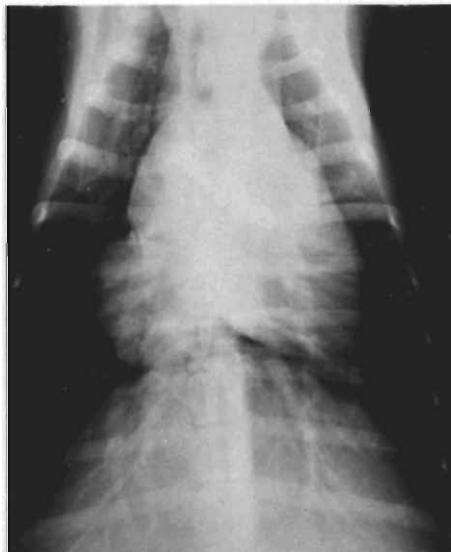
Figure 1. Lateral and dorsoventral radiographs of a 9-month-old German Shepherd dog presented with ascites, decreased exercise tolerance, and groaning.



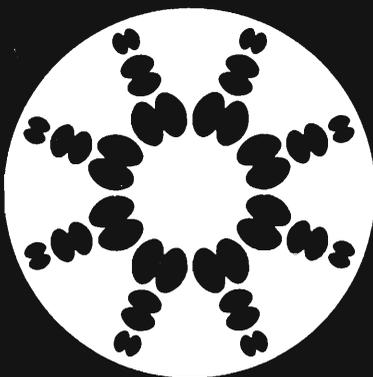


Figure 2. Lateral and dorsoventral radiographs after the blood had been aspirated (note catheter in pericardium).

aspirated. The thorax was re-evaluated. Radiographs taken at this time (Fig. 2) revealed a well-circumscribed soft-tissue mass closely attached to the right ventricular area. The mass was previously obscured by pericardial fluid. Radiographic differential diagnosis now includes abscess, granuloma or neoplasia arising from right ventricular wall.



Considering the age of the dog, a granuloma or abscess would be a more likely consideration. The mass was surgically excised and found to be necrotic tissue composed of fibrin, RBC's, PMN's and cellular debris. The origin of the mass was unknown, possibly related to trauma or an unknown infectious agent. The dog made an uneventful recovery.



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