

Signalment:

5 years FS Labrador Retriever.

History/Chief Complaint:

The patient was presented with signs of anorexia, increased breathing effort for a day. At presentation she vomited dark brown liquid material twice. She would drink some water but she vomited after drinking.

Physical Exam:

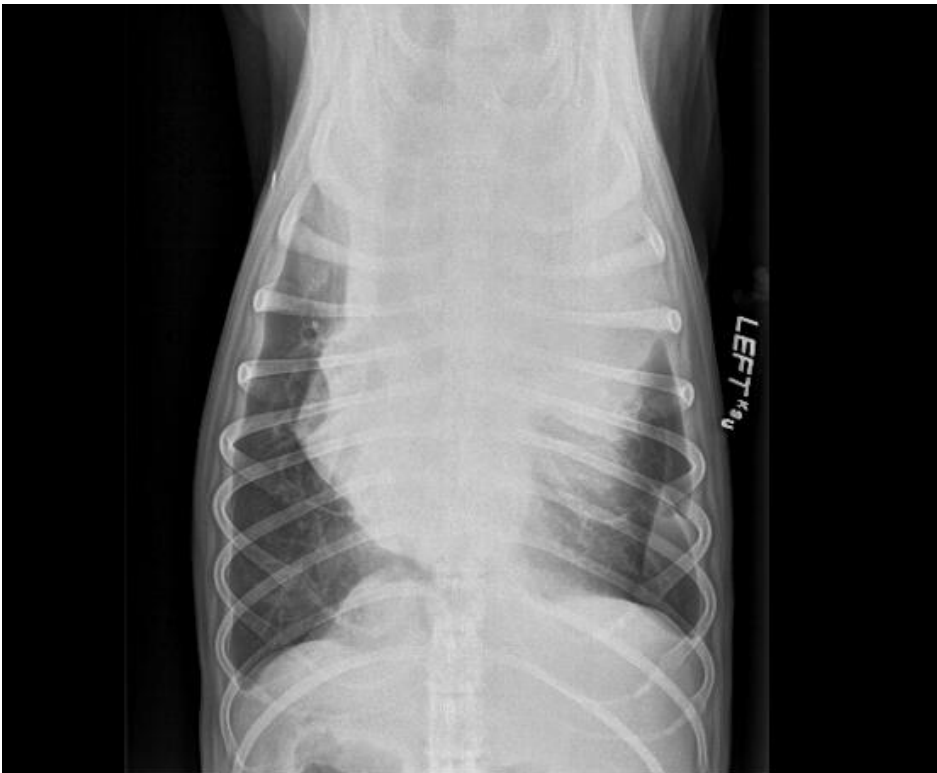
1. Depression
2. Weak, cachexia, muscle atrophy, BCS 2/5
3. Fever: 105.2 F
4. Tachypnea: panting
5. Severe respiratory distress
6. Hyperptyalism
7. Normal heart rate

Blood Work Abnormalities:

The blood work was not performed.

Diagnostic Plan Step #1: Thoracic Radiographs





Thoracic Radiograph Findings:

Soft tissue opacity mass at mostly left cranial thorax displaces trachea dorsally and to the right, and cardiac silhouette caudally and to the right, and also increases the opacity of entire cranial thorax. On lateral view there is soft tissue opacity area between lungs and thoracic body wall, which has larger size at ventral thorax and displaces the ventral lung margin dorsally significantly superimposing with cranial and ventral cardiac silhouette, and smaller size between the dorsal margin of caudodorsal lung field, dorsal margin of diaphragm and body wall. On VD view the soft tissue opacity is most obvious between caudolateral margin of lung field and thoracic body wall in a triangular shape, and the lateral margin of left caudal lung lobe is displaced to the right.

Thoracic Radiograph Interpretation:

1. Mediastinal mass which could be from either thymus or lymph node. Neoplasia, hematoma, cyst, abscess, granuloma should be considered.
2. Pleural effusion have differentials of neoplastic effusion, exudate, modified transudate, transudate, or hemorrhage.

Diagnostic Plan Step #2: Thoracic Ultrasound



Thoracic Radiograph Findings:

There is a medium size anechoic area about 3 cm in length right below the cranial ventral thoracic body wall, with irregular margin and triangular shape. There is an echogenic, irregular margin, nodular shape, large size mass at the cranial left thorax.

Thoracic Radiograph Interpretations:

1. Pleural effusion between both side of lungs and body wall.
2. Mass at cranial thorax.
3. The top differentials for the mass are thymoma or lymphoma.

Diagnostic Plan Step #3: FNA of the mediastinal mass with ultrasound guidance and submit for cytologic exam

Cytologic Findings and Comments:

Cytologic findings most consistent with thymoma, also moderate density of mast cells, mild neutrophilic inflammation and evidence of necrosis and hemorrhage were noticed.

Outcome:

Recommendation include CT and surgery for treatment, however, the general weak condition and respiratory distress were concerned. As the patient went into respiratory distress, CPR, intubation and epinephrine injection were performed but not successful. Owner elected to stop CPR and take home for aftercare.

Case Discussion: About Cranial Mediastinal Tumors

It is rare to see cranial mediastinal tumors in dogs and cats. Two common tumors noticed are lymphoma and thymoma, although ectopic thyroid carcinoma and neuroendocrine carcinoma are also seen in literature. Thymomas are most of time benign, and are divided into invasive and non-invasive. The invasive thymoma would invade the adjacent lung lobes, pericardium or blood vessels. Along with thymoma there are usually other diseases happening such as myasthenia gravis, hypercalcemia, second non-thymic malignancies, or immune mediated diseases such as anemia and polymyositis. Thoracic radiograph and CT are commonly used to diagnose and stage cranial mediastinal tumors. Ultrasound guidance FNA is used to differentiate lymphoma and thymoma or other tumors.

For thymoma, it is best to perform surgical exploration to differentiate if it is invasive or non-invasive. For non-invasive and some invasive thymoma, surgical resection is the option. Radiation therapy is reserved for invasive thymoma that is not able to be surgically removed. Common option for lymphoma is chemotherapy, occasionally radiation therapy, and rarely surgery.

Cats with thymoma has a good prognosis of 2 years median survival time after treatment by surgery or radiation. Dogs with non-invasive thymoma has an excellent prognosis with an 83% over 1 year survival rate after surgery and a median survival time of 248 days after radiation therapy. Dogs with invasive thymoma or having thymoma along with myasthenia gravis and megaesophagus have a guarded prognosis.

Works cited:

Dr. Julius M. Liptak. "Cranial Mediastinal Tumors." Small Animal Surgery and Surgical Oncology. http://www.animalcancersurgeon.com/Mediastinal_Tumors.html