

VSES Success Story:

“Benjamin”



Benjamin

Benjamin, a 7-year-old Shepherd Mix presented to his local veterinarian for evaluation of abnormal breathing. On examination it was noted that Benjamin had quiet lung sounds. Chest radiographs (x-rays) were taken which revealed fluid around his lungs. A sample of the fluid was collected which revealed chyle. Chyle is a fluid that is high in fat (lymphatic fluid from the intestine). Blood work was performed which had no significant findings and Benjamin was referred to VSES for further evaluation of chylothorax.

Chylothorax is the collection of chyle in the thoracic cavity around the lungs. There are many different causes of chylothorax such as a mass in the mediastinum (area where the heart is located), heart disease, lymphangectasia (leaky lymphatic vessels) or abnormalities of the thoracic duct (major duct of the lymphatic system) but most commonly an underlying cause cannot be found (called idiopathic chylothorax). The only way to diagnosis idiopathic chylothorax is ruling out all other causes.

At VSES, repeat chest radiographs were performed which showed fluid around the lungs but also the airway to one of the lungs on the right side of the chest went in an abnormal direction. A large amount of chylous effusion was removed to help Benjamin breathe better temporarily and multiple diagnostics were performed to look for a cause for the chylothorax. Diagnostics performed included a heartworm test, which was negative, a thoracic ultrasound to look for any masses, none, which were noted, and an ultrasound of the heart to look for heart disease, which was also not noted.

If a condition is found causing chylothorax, the cause should be treated immediately. If idiopathic chylothorax is diagnosed medical or surgical treatment can be performed. Medical management most commonly includes a low fat diet to try to decrease the amount of fat in the fluid (which may allow the patient to more easily absorb the fluid on their own), administration of a benzopyrone drug (Rutin) to try to decrease the fluid collecting around the lungs and intermittent removal of the fluid (thoracocentesis). Surgical management includes thoracic duct ligation (closure of the thoracic duct), pericardectomy (removal of the tissue surrounding the heart), cisterna chyli ablation (disruption of the cisterna chili which is a dilated sac at the beginning of the thoracic duct), omentalization and pleuroperitoneal shunting (transfer of the fluid around the lungs into the abdomen). Unfortunately, there is no one surgical treatment option that has been proven to definitely cure this condition and surgery has an approximately 50% success rate.

Benjamin was started on medical management, which was continued for ~8 weeks but it did not improve his condition and surgery was performed including a cisterna chyli ablation, omentalization and exploratory thoracoscopy with pericardectomy and thoracic duct ligation. On examination of the chest, torsion (twisting) of one of the right lung lobes was noted so the twisted right lung lobe was also removed. Benjamin recovered smoothly from surgery and at his 2-week recheck he was doing well. He required one additional thoracocentesis at 3months post-op but has had no recent episodes of difficulty breathing and he is now 8 months postop. It is unclear if the lung lobe torsion caused the chylothorax or the chylothorax caused the lung lobe torsion but knowing this would not influence Benjamin's prognosis. What is important is that he is more active now and continues to run and play with no problems. He even recently played with the other dog in the house, which he had not done in more than a year. Benjamin is an extremely lucky dog to have owner's that are strongly dedicated to fixing him. Idiopathic chylothorax can be an extremely frustrating condition for owners and veterinarians but Benjamin's owners' willingness to pursue the treatment options available and not give up- saved Benjamin's life.

The cardiology, critical care, internal medicine, radiology, and surgery departments at Veterinary Specialists of Rochester worked together with Benjamin's owners and Dr. Jones at Bayview Animal Hospital to help Benjamin feel better.