

# DIAPHRAGMATIC HERNIA

## **Traumatic diaphragmatic hernias**

### **Definition**

The diaphragm is a muscle made up of two parts, a strong central portion and a weaker outer portion. The diaphragm separates the abdominal cavity from the thoracic cavity. A diaphragmatic hernia (DH) occurs when the diaphragm is disrupted in a way such that abdominal organs can enter the thoracic cavity. Ultimately, the abdominal pressure exceeds pressure within the thorax, and the diaphragm tears.

There are two different types of diaphragmatic hernias, acquired and congenital. Congenital is divided further into Pleuroperitoneal Diaphragmatic Hernia and Pericardioperitoneal Diaphragmatic Hernia (PPDH). Acquired is divided into acute (traumatic) and chronic. The most common causes for a DH include hit by car, dog bite, gun shot, or stab wound. Symptoms vary and can include labored breathing, lethargy, vomiting, and arched back (abdominal pain). There is usually a history of recent trauma.

### **Diagnostics**

The most common organs that herniate into the thorax include the liver, small intestines, stomach, and spleen. Thoracic radiographs can usually diagnose a DH. Thoracic ultrasound can be done if radiographs are inconclusive. An upper GI positive contrast study can be done as well. This involves giving oral contrast to help identify the location of stomach and intestines on radiographs. Positive contrast celiography (peritoneography) is another diagnostic tool; contrast is injected into the abdomen to see if it appears in the thorax on radiographs.

### **Surgery**

Surgery is the treatment of choice. The goal of surgery is to remove abdominal organs from the thorax and replace them back into the abdomen. After this is accomplished, the rent or tear in the diaphragm is repaired using suture (sealed closed). Depending on the damage inside the thorax, a chest tube may be placed at the time of surgery.

### **Postoperative Care**

**After surgery, pain medications are given for 1-2 weeks duration. Average hospital stay can range from 2 days to one week, depending on the inciting cause of the DH and if a chest tube is placed.**

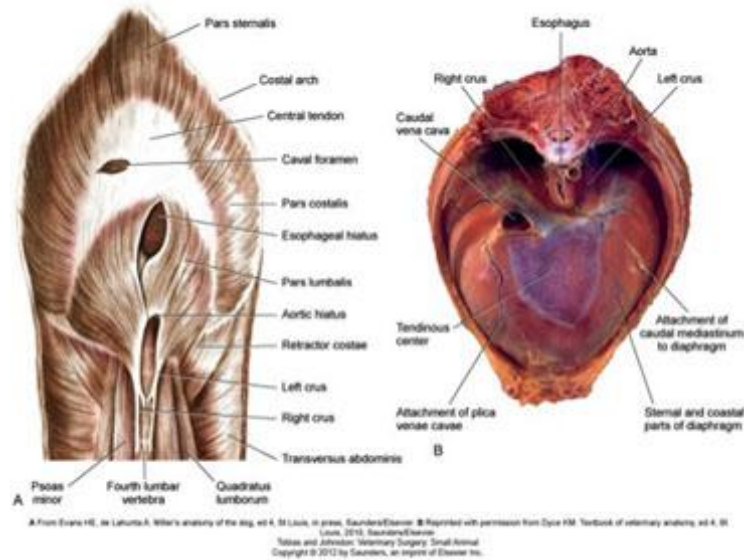
### **Complications**

Post-operatively, some complications are possible, including pneumothorax (air within

the chest), damage of any entrapped organs, pulmonary edema (fluid in the lungs), pleural effusion (fluid within the thorax), or re-herniation. Rarely, abdominal compartment syndrome (ACS), and re-expansion pulmonary edema (RPE) can be seen. Every patient is carefully monitored after surgery for any of these clinical signs.

### Prognosis

Recent studies show that the prognosis for an acute diaphragmatic hernia with surgery is good; ranging from 82-89% survival rate.



Tobias & Johnston; Veterinary Surgery: Small animal  
Copyright © 2012 by Saunders, an imprint of Elsevier Inc.

Author: Dr. Chrissy Mamone