

## **Diaphragmatic hernia**

Herniation of a portion of the reticulum through a diaphragmatic rupture causes chronic ruminal tympany, anorexia and displacement of the heart.

### **Etiology**

Most cases occur because of

1-weakening of the diaphragm by lesions of traumatic reticuloperitonitis, but diaphragmatic rupture can occur independently of a foreign body and congenital defects of the diaphragm may be a cause in some animals.

### **Pathogenesis**

1-Ruminal hypermotility is present. It seems probable that there is either achalasia of the reticulomasal sphincter due to involvement of the vagus nerve or impairment of function of the esophageal groove caused by the fixation of the reticulum to the ventral diaphragm.

2- The disturbance of function in the fore stomachs suggests that food can get into the rumen but cannot pass from there to the abomasum.

3-The hypermotility is thought to be due to overdistension of the rumen and to be the cause of the frothy bloat.

4-There is usually no interference with respiration without major herniation but displacement and compression of the heart occur commonly.

## **Clinical findings**

1-There is a capricious appetite and loss of condition for several weeks before abdominal distension due to accumulation of fluid and froth in the rumen,

2- persistent moderate tympany of the rumen, occurs.

3-Grinding of the teeth may occur and the feces are pasty and reduced in volume.

4-Rumination does not occur but occasionally animals regurgitate when a stomach tube is passed.

5-The temperature is normal and bradycardia may be present (40-60/min) . Breathing is usually normal.

6-A systolic murmur may be present and the intensity of the heart sounds may suggest displacement of the heart, usually anteriorly or to the left.

7- Reticular sounds are audible just posterior to the cardiac area in many normal cows and they are not Significantly increased in diaphragmatic hernia.

8-A more severe syndrome is recorded in cases where viscera other than a portion of the reticulum is herniated. Peristaltic sounds may be audible in the thorax and there may be interference with respiration and signs of pain with each reticular contraction.

9- Affected animals usually die from inanition in 3-4 weeks after the onset of bloat.

## **Treatment**

1-Most recorded attempts at surgical repair in cattle have been unsuccessful and treatment has not usually been recommended.

2-The animals could not be left as they were, so salvage by slaughter has been the usual outcome.

3-The ruminal contents are frothy, and trocarization or passing a stomach tube has virtually no effect in reducing the tympany, nor have standard antifrothing agents.