A report of seeing a part of the spleen in the Ventral of the Thoracic cavity in a dog

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Case Report

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Introduction

A diaphragmatic hernia is a protrusion of abdominal viscera through the diaphragm into the thorax. Diaphragmatic hernias that may be recognized radiographically include traumatic peritoneopericardial, hiatal, peritoneopleural, and those secondary to congenital diaphragmatic defects. Abdominal trauma is the most common cause of diaphragmatic hernia. A high momentary increase

in abdominal pressure when the glottis is open produces a high pleuroperitoneal pressure gradient that may result in a diaphragmatic hernia the high pleuroperitoneal gradient may produce a rent in the muscular portion of the diaphragm, or it may force abdominal viscera through congenitally weak or defective areas Clinical signs that may be observed with diaphragmatic hernias include dyspnea, pain, vomiting, regurgitation, muffled heart sounds, and a weak femoral pulse. Some diaphragmatic hernias may not cause clinical signs and are detected incidentally Radiography plays an important role in confirming a diagnosis of diaphragmatic hernia and may provide information about location, extent, contents, and secondary complications associated with the hernia. If a diagnosis cannot be confirmed from survey radiographs , ultrasonography and/or other imaging procedures may be performed to provide additional diagnostic information. Other radiographic procedures consist of administration of oral barium sulfate positional radiographic views, removal of pleural fluid and Repeat radiography of the thorax, and positive contrast-medium peritoneography. (1, 2, 11, 12)

Ultrasonographic examination of the diaphragm may add diagnostic information, particularly for patients with pleural fluid that obliterates soft tissue. The examination is best done transhepatically. Ultrasonographic signs of a diaphragmatic hernia include identification of abdominal structures within the thorax, particularly the liver, and an interruption in the diaphragmatic outline. An interruption in the diaphragmatic outline may not be seen consistently with diaphragmatic hernia. (1, 12)

CASE HISTORY

A six-year-old, male, Shih Tzu breeder, went to the hospital for a check-up period and returned to the diagnostic imaging department after an internal disease specialist visit. First, a graph of the Thorax

and abdomen was taken in the lateral and ventrodorsal view that after observing the graphs, a mass with soft tissue opacity was observed in the chest wall, which, according to a more precise method.

Sonography request was given to the patient. Which the owner of the patient accepted. When ultrasound, There was nothing special abdominal area was observed. However when the Sonography of the spleen, the spleen continued to appear in the Thorax area. Because of this, the opacity of the fine Soft tissue in the graph was part of the spleen. Which is due to damage to the Rapture or Hernia that can be congenital or due to impact. The patient had no history of a patient's past.

Discussion and conclusion

In patients with a chronic diaphragmatic hernia, the liver and small intestine are the most frequently herniated, followed by omentum, spleen, stomach, colon, and pancreas. Strangulation of organs may be found at surgery. The most consistent radiographic signs of traumatic diaphragmatic hernia are abdominal viscera within the thorax displacement of abdominal or thoracic organs, or both partial or complete loss of the thoracic diaphragmatic surface outline asymmetry or altered slope to the diaphragm on the lateral projection11; and the presence of pleural fluid Identification of abdominal structures in the thorax is a conclusive sign of diaphragmatic hernia. Small bowel is easily identified when it is gas flled; when fluid flled, it appears as a tubular structure. The stomach may be flled with gas, fluid or ingested material. In addition, gastric rugal folds may provide a marker for identifying the stomach within the Thorax. In the absence of finding abdominal organs in the thorax

Cranial abdominal organ displacement or absence of abdominal organs from their normal location is an indirect sign of diaphragmatic hernia. The liver, spleen, small bowel, and stomach must be assessed closely for displacement. (1, 2, 11, 12)

Results

Approximately 15% of all diaphragmatic hernias are congenitally predisposed. Included in this group is peritoneopericardial diaphragmatic hernias, hiatal hernias, and peritoneopleural hernias. Herniation in association with congenital diaphragmatic defects may occur in an animal of any age after abdominal trauma or transitory increase in intraabdominal pressure. Defects in diaphragmatic development may be present and never result in a hernia. (1, 2)

Image

(Radiology & Sonography taken by myself in the field of Radiology)

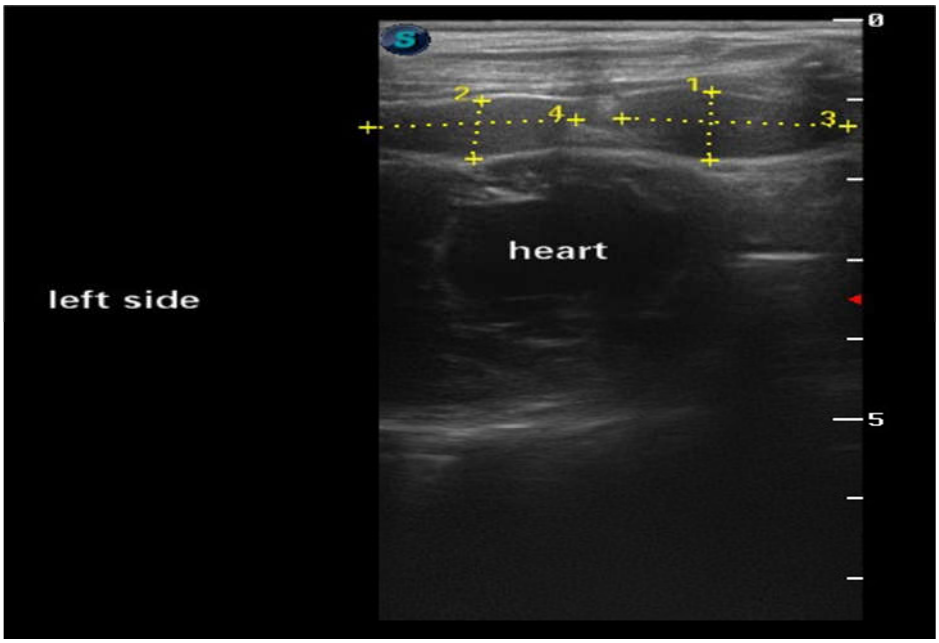


Fig.1

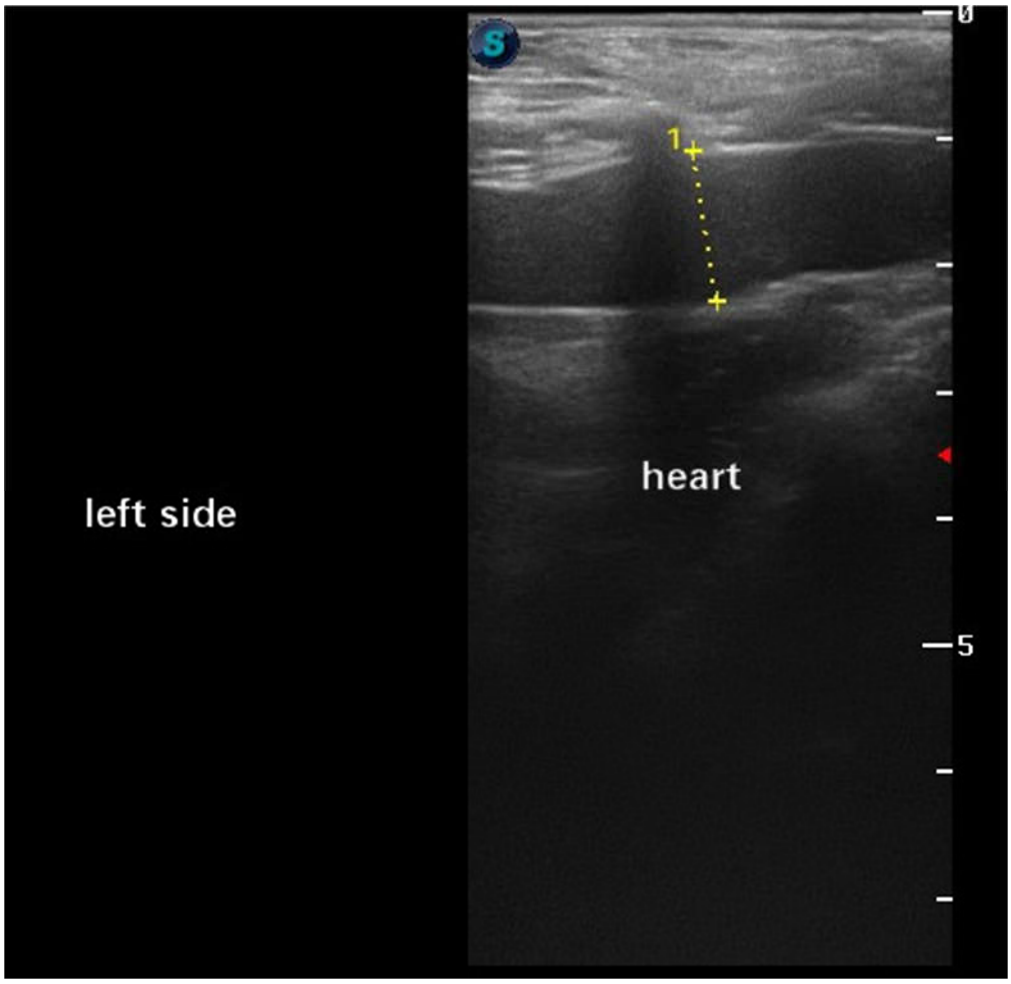


Fig.2

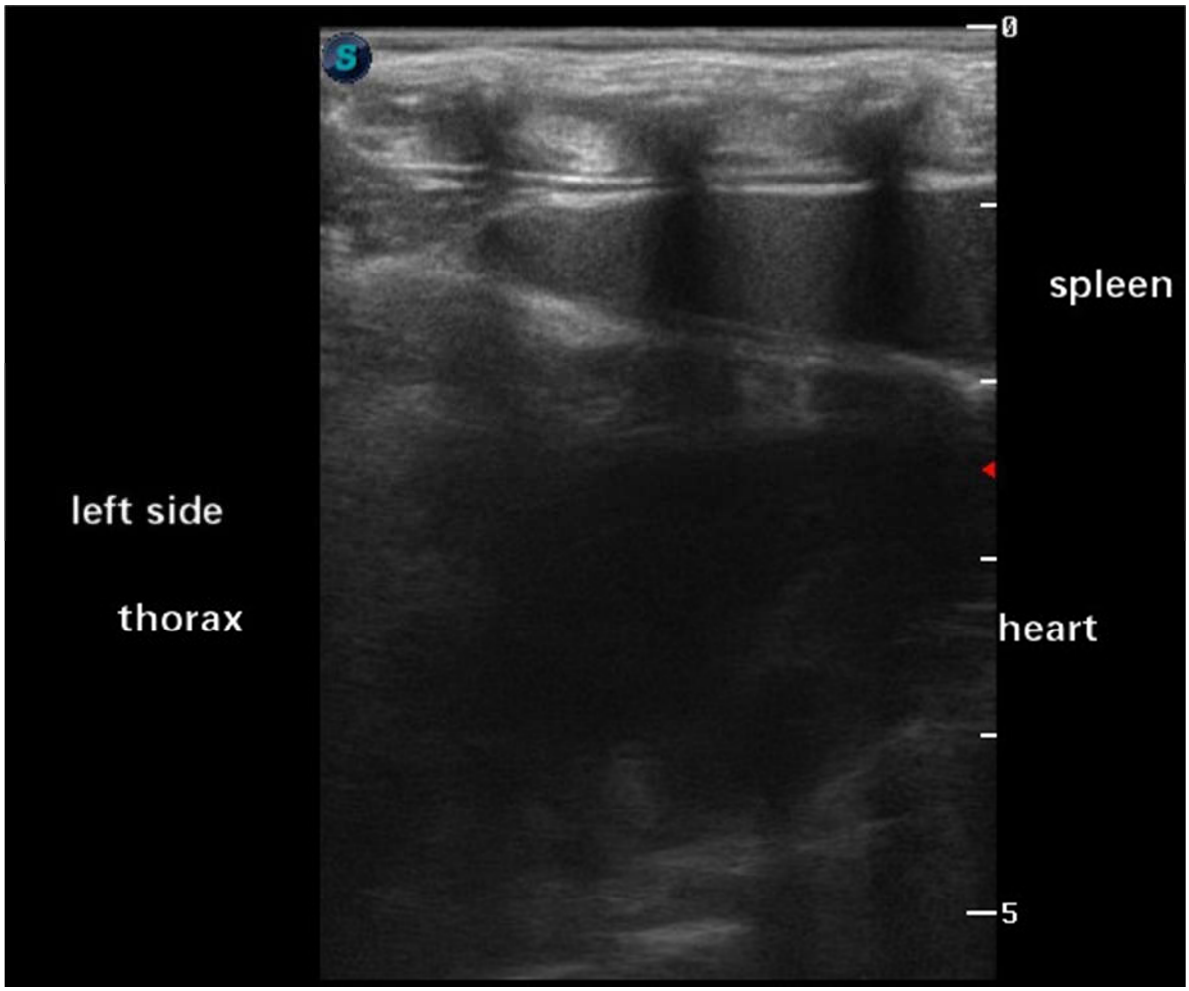

0
spleen
left side
thorax
heart
5

Fig.3

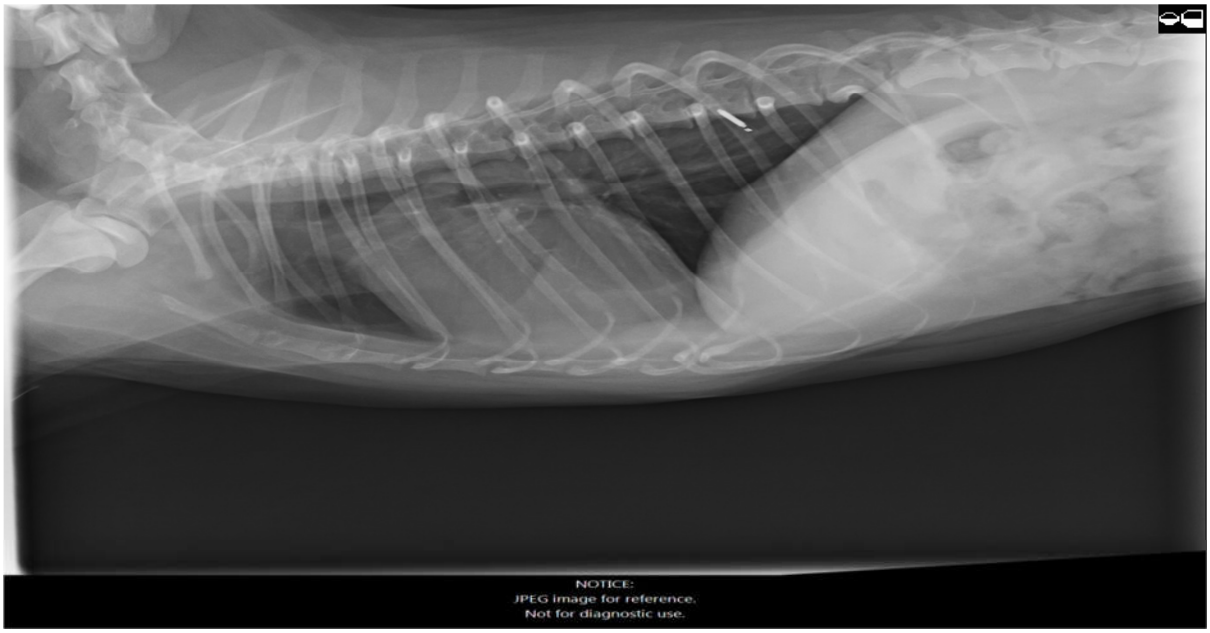

NOTICE:
JPEG image for reference.
Not for diagnostic use.

Fig.4



Fig.5

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1) Text book of Veterinary diagnostic radiology. Donald E. thrall ISBN: 978-1-4557-0364-7 year: 2013 Pages: 538-540

2) Diagnostic radiology and ultrasonography of the dog and cat. Kevin Kelly. ISBN: 978-1-14377-0150-0 year: 2005 Pages: 361-365

3) VETERINARY SURGERY: SMALL ANIMAL Karen M. Tobias, DVM, MS, And DACV ISBN: 978-1-4377-0746-5

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9) Small Animal Radiology and Ultrasound - Ronald L. Burk ISBN 0-7216-8177-8

10) Practical Small Animal MRI ISBN: 978-0-813-80607-5

11) Diagnostic Ultrasound in Small Animal practice ISBN: 0-632-05387-9 Year: 2006

12) Atlas of small animal ultrasonography Dominique penninck Year : 2008 ISBN: 978-0-8138-2800-8/2008.