

## What is Your Diagnosis

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### Signalment

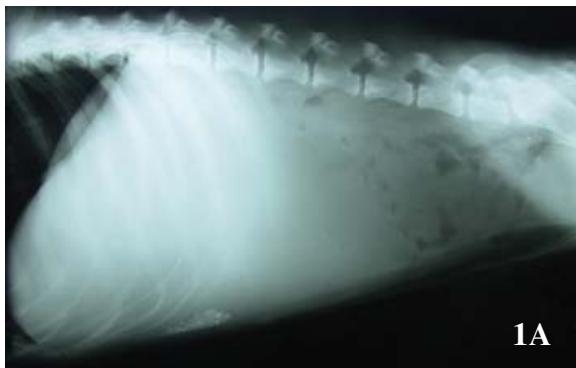
A 4-year-old male Shar Pei.

### History

The dog had been continuously lost his weight for 2 months without inappetite. Mild vomiting was sometimes presented an hour after meal. When the dog had liquid food or water, there was no vomiting or regurgitation.

### Clinical Examination

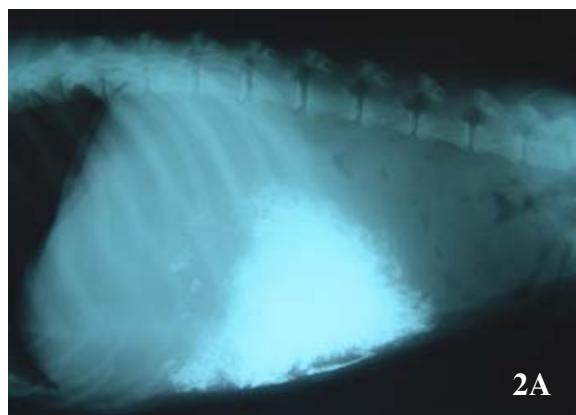
The dog was seriously emaciated. None abnormal mass could be found via abdominal palpation. Complete blood count profile revealed mild anemia. Liver and renal profiles were within normal limits.



1A



1B



2A



2B

**Figure 1. A, B.** Right lateral and ventrodorsal abdominal radiographs.

**Figure 2. A, B.** Right lateral and ventrodorsal abdominal radiographs taken at time 60 minutes after 30% w/v barium sulphate suspension administration.

Give your diagnosis and turn to the next page.

## Radiographic findings

Plain radiographs (Figures 1A, B) revealed caudal displacement of small intestine, transverse colon and spleen. There were several particles of small radiopaque foreign bodies depositing in the pyloric antrum (Figures 3). The Right lateral and ventrodorsal abdominal radiographs at time 60 minutes after 30% w/v barium sulphate suspension administration (Figures 2A, B) showed retention of most of contrast media in dilated stomach. There was only few amount of barium sulphate passing

through small bowel. The right lateral radiograph (Figures 2A, 4) indicated the thickness of the pyloric wall (approximately 1.5 cm.). The ventrodorsal radiograph (Figures 2B, 5) showed a hemispheric filling defect in the pylorus that protrudes into the lumen.

## Radiographic diagnosis

Chronic hypertrophic pyloric gastropathy (CHPG), Chronic pyloric obstruction.



**Figure 3.** Sedimentation of the small radiopaque foreign body could be seen in the pyloric antrum (large white arrow) in the right lateral plain radiograph.

**Figure 4.** Thickening of the pyloric wall (2 headed arrows) could easily be detected in the right lateral radiograph after barium sulphate administration.

**Figure 5.** A hemispheric filling defect in the pylorus (small white arrows)

## Discussion

CHPG can be evaluated by a thickening of pyloric mucosa or muscle or both compartments which is caused by an obstruction of pylorus. This abnormality is usually found in brachycephalic breeds such as boxers and bulldogs. Vomiting after eating solid food is the most common clinical sign that does not occur after eating liquid food or water.

Radiographically, dogs with CHPG have various gastric size from normal to marked enlargement. In order to evaluate this gastric disorder, using barium sulphate swallow will show both delayed gastric emptying (physiological disorder) and abnormal pyloric wall appearance (anatomical disorder). Delayed gastric emptying with retention of most of barium instomach is a significant sign of pyloric obstructive disease. An

appearance of a thickening of pyloric wall from contrast radiograph can help to indicate a CHPG. In addition, CHPG may be detected ultrasonographically by measuring a pyloric muscular thickness, which was reported to be greater than 3 mm in mild to moderate and greater than 8 mm in severe chronic pyloric hypertrophy.

## References

- Fossum, T.W. 2002. Benign gastric outflow obstruction. Surgery of the stomach. In: Small Animal Surgery. 2<sup>nd</sup> ed. T.W.Fossum(ed). Missouri: Mosby. 360- 363.
- Mahaffey, M.B. and Barber, D.L. 2002. The stomach. In: Textbook of Veterinary Diagnostic Radiology. 4<sup>th</sup> ed. D.E.Thrall (ed.). Pennsylvania: W.B. Saunders Company. 615- 638.