What's your Diagnosis?

Signalment: 11 year old Male Castrate Bichon Friese 7.6 kg

Presenting Complaint: Vomiting large amounts of fluid frequently

History: Owner was away on vacation for two weeks and when returned noticed some weight loss and lethargy. A week later, he began vomiting and continued to vomit overnight with an increase in frequency and amount of fluid in vomitus on the morning of presentation. Is lethargic and retches between vomiting.

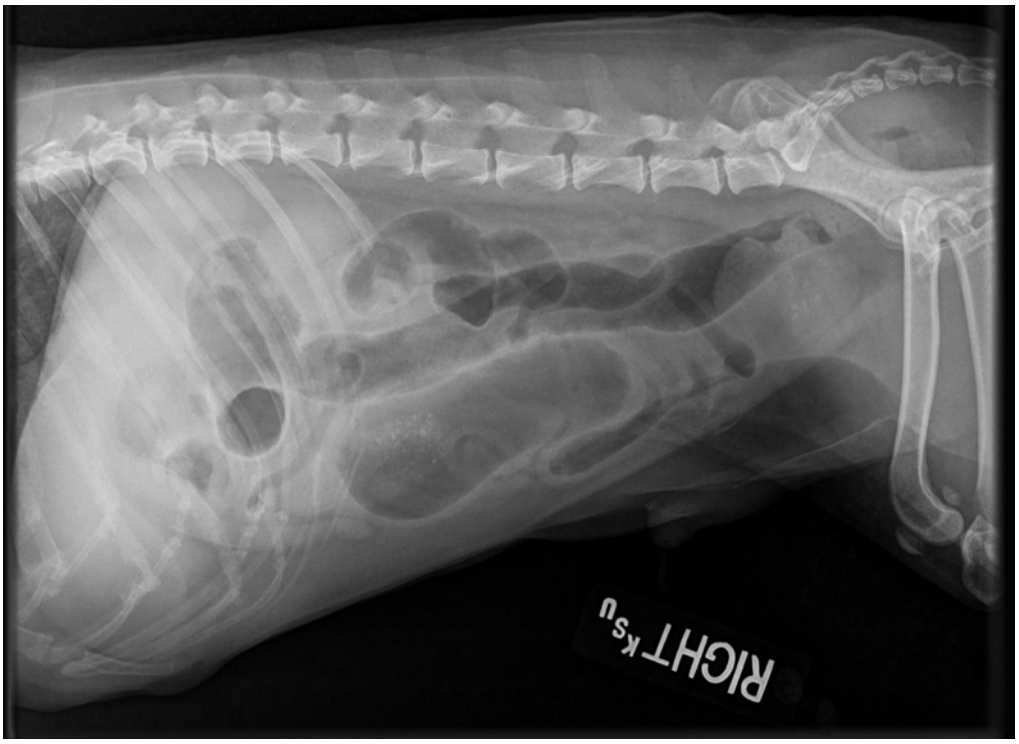
Physical Exam Results: Slightly tacky mucus membranes. Watery stools noted during rectal. Borborygemi upon abdominal auscultation

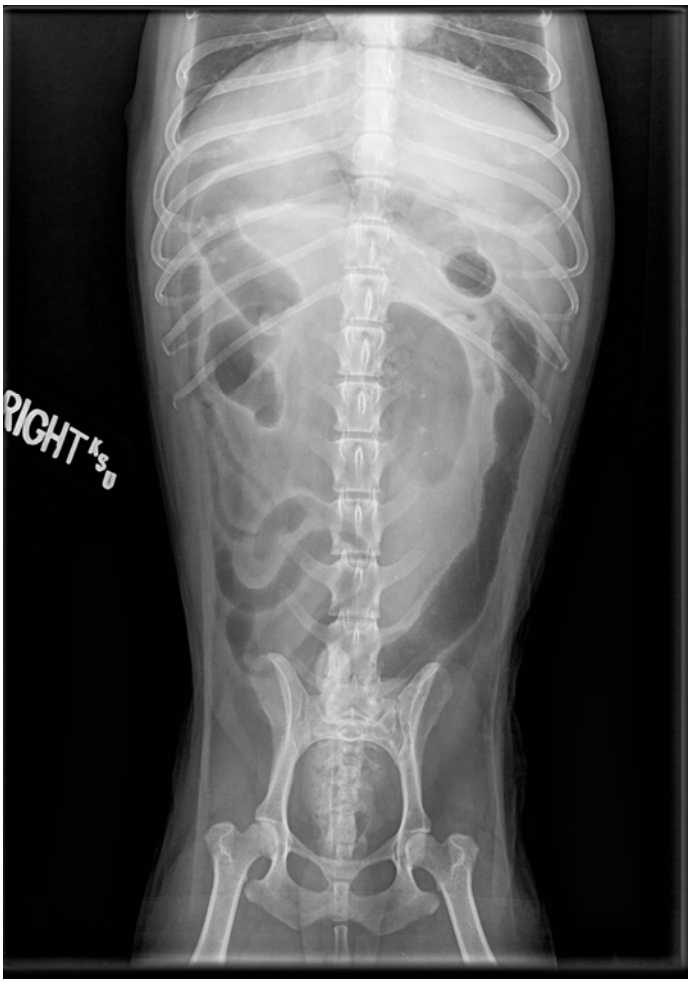
Diagnostic Plan: CBC/ Chemistry Panel

Cerenia 8mg subcutaneously

Blood Work: Hyponatremia 144 mmol/L (147-154) and Hypochloremia 98 mmol/L (108-118)

Abdominal radiographs:



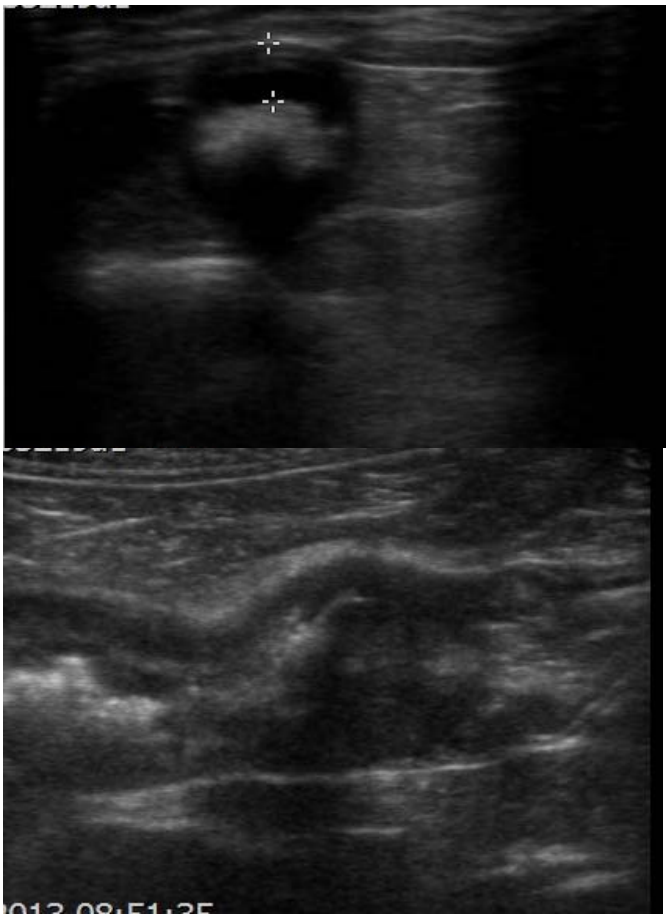


Radiographic Interpretation:

Blunted smooth margin of ventral liver lobe with gastric axis in normal position. On the lateral view there is an increase in soft tissue opacity in the cranial dorsal abdomen making the margins of kidneys, caudal liver and stomach difficult to visualize. There are two populations of intestines. One set is of normal size and is soft tissue/ fluid opacity seen best in right cranial abdomen. The other set of intestines is gas distended and at its widest segment measures 3 times the width of the vertebral body of the fifth lumber vertebrae. There is a cluster of mineral opacity small irregularly marginated material in the left ventral mid abdomen. In the VD view it can be located to within one of the gas distended intestinal loops. There are small mineral opacity irregularly marginated objects within the bladder.

Radiographic Conclusion:

Chronic partial mechanical obstruction with gravel sign. Rounded liver margins. Radiopaque cystic calculi.



Ultrasound: Mass measuring 1.3x2.5 cm of thickened small intestine most likely jejunum that extends from intestinal wall into lumen. Partial obstruction of intestinal material with distended bowel proximal to it.

Case follow-up: Patient was taken to surgery to remove mass and had it biopsied along with several pieces of liver. Diagnosis via histopathology was mucinous adenocarcinoma of the small intestine with transmural spread to mesentery. Margins of mass removal were clean. The liver was diagnosed as focal hepatic lipidosis. He recovered from surgery, went home and is doing well at home.

Discussion: Radiographic appearance of a partial small intestine obstruction

With a partial obstruction, GI material is still able to get through the intestines. Therefore, there is not as dramatic of a difference between dilated intestine orad to the obstruction and normal intestine aborad to it as you would expect to see with a complete mechanical obstruction. In fact, there may not be any radiographic findings if the obstruction is very small or has not been causing blockage for very long as it takes longer for the bowels to become dilated. There may be signs of chronicity such as gravel sign seen in this case. A gravel sign is the presence of small mineral opacities clustered in one segment of mildly distended small intestine. These heavier particles tend to settle in front of a partial obstruction, as fluid and less dense particles move beyond the obstruction.

Case reviewed by: Daniela Ostahowski