

PARTIAL TORSION OF THE COLON IN A DOG

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An 8 year-old male/neutered Husky-cross was presented with a possible intestinal obstruction. The dog had been retching the night before, and in the morning was depressed and had several episodes of vomiting. Upon presentation he was 5% dehydrated, tachycardic, and had pain with abdominal palpation. Abdominal radiographs were obtained, which showed a severely gas-distended structure in the cranial to mid-abdomen, as well as additional dilated loops of small intestine (Figures 1 and 2). Blood work was unremarkable. An abdominal ultrasound was performed, which showed there was no gastric involvement, although small versus large intestinal origin was not determined. He was treated with two liters of crystalloids for suspected hypovolemic shock, started on injectable Unasyn and hydro-morphone, and an exploratory laparotomy was performed.

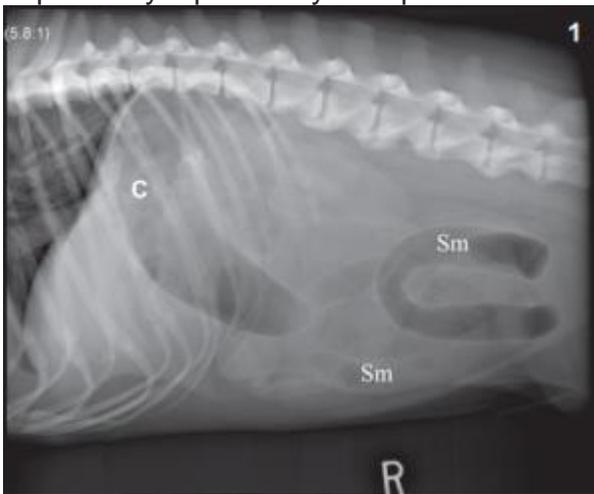


Figure 1: Lateral abdominal radiograph. c=abnormally distended colon; sm= diffuse dilated bowel loops.



Figure 2: VD abdominal radiograph. c= colon, abnormally located right of midline.

At surgery, a partial torsion of the colon was identified. The section of colon just distal to the ileoceco-colic junction and up to the pelvic inlet was noted to be severely dilated and distended with gas. A 15 cm segment of descending colon was noted to be partially torsed on itself, approximately 180 degrees, resulting in displacement to the

right side of the caudal abdomen. The segment was fixed in a dorsal and right lateral position, with evidence of congestion and ischemia, and a purple discoloration to the affected serosal surfaces.

The partial torsion was corrected, and a 21g hypo-dermic needle attached to suction was used to help remove the luminal gas from the affected intestine. The intestine was observed over a short time period, and reperfusion was established. The etiology for the torsion was not determined. Although the affected bowel remained dilated and had diminished tone, vascular supply to the segment had not been permanently damaged, and no resection was performed. A colopexy was performed by suturing the unaffected descending colon to the left peritoneal wall using non-absorbable suture with a muscle-flap technique. Evaluation of the remainder of the gastrointestinal system revealed no discrete abnormalities, and a full-thickness biopsy was taken from the jejunum. A prophylactic gastropexy was done, also using a muscle-flap technique. Re-evaluation of the affected colon after completion of the surgical procedures showed marked improvement in the color and motility of the bowel. The abdomen was flushed with warm saline prior to closure. Histopathology of the jejunal biopsy revealed mild lymphoplasmocytic and eosinophilic enteritis with mild to moderate edema. The dog developed hemorrhagic diarrhea secondary to mucosal sloughing, and this resolved in two days. He was discharged on the third day post-surgery, and was clinically normal at the time of suture removal two weeks later.

Colonic torsion is a rare and potentially fatal condition. It has been reported in the literature in a small number of dogs and in one cat. The etiology is often unknown, although it has been associated with a rent in the mesocolon. Presenting signs can include abdominal pain, depression, tenesmus, hematochezia, diarrhea, vomiting, anorexia and hypovolemic shock. In most cases of colonic torsion, severe vascular compromise occurs, resulting in necrotic bowel that requires resection. The level of the torsion with respect to the cranial mesenteric artery will determine the segments of potential vascular compromise, and those which spare this vessel may have a better prognosis for survival.

Early recognition and surgical exploration are important in suspected cases of either large or small bowel torsion, as prolonged vascular compromise can result in tissue necrosis, bowel rupture, sepsis and death. Correction of the torsed segment can result in reperfusion injury and shock; it is recommended that dead or obviously necrotic organs/tissues which have torsed should be resected or removed without attempting to untwist the torsed portion.

Both the level and the degree of torsion can greatly affect prognosis. In this dog the fact that the torsion was partial probably spared him from necrosis and resection and led to a more favorable prognosis.

References:

Torsion and volvulus of the transverse and descending colon in a German shepherd dog. Z Halfacree, et al. Journal of Small Animal Practice 2006 Aug; 47(8):468-70.

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