

MESENTERIC TEAR ALONG WITH INTESTINAL ENTRAPMENT AND VOLVULUS IN A GREAT DANE

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Strangulation of the intestine through omental tear or mesenteric rent or subsequent to duodenocolic ligament rupture has been less frequently reported in veterinary literature (McGowan, 1981; Hosgood *et al.*, 1992 and Hassinger, 1997), the cause of which is not well defined. Mesenteric volvulus is a rare and usually fatal condition in which the intestine twists on its mesenteric axis, resulting in strangulating mechanical obstruction of the small intestines and compression of the cranial mesenteric artery and its branches (Brown, 2003). A case of intestinal entrapment and strangulation due to mesenteric tear, along with intestinal volvulus, in a three-year-old intact male Great Dane, is reported.

The dog was presented with a one month long history of intermittent vomiting, mucus-laden tarry diarrhea and progressive weight loss. The animal was lethargic and cachectic. Mucous membranes were pale, the temperature was

normal, while heart rate and respiratory rate were elevated. There was pain on abdominal palpation and intestines were found distended. Peristalsis of the distended segments could be noticed across the abdominal wall. Survey radiographs of the thorax ruled out mega-oesophagus, and that of the abdomen ruled out any radio-opaque foreign bodies. But the bowel segments were found severely distended with gas. Barium contrast study revealed contrast lined distended intestinal segments. Intestinal volvulus was diagnosed tentatively and exploratory laparotomy and surgical correction was decided, but the animal collapsed during induction of anaesthesia. Post-mortem gross examination of the GI tract revealed mesenteric tear along with entrapment of intestine, also volvulus and severe vascular occlusion of mesenteric vessels (Fig. 1). The intestine segments involved were severely discoloured. The major length of intestine was distended.



Fig 1 - Entrapment of intestine, volvulus and severe vascular occlusion of mesenteric vessels

Mesenteric volvulus occurs in young adult, male, large-breed dogs - the cause of which is unknown as also mentioned by Brown (2003); resulting in varying degrees of intestinal strangulation and vascular compromise. Omental, mesenteric and duodeno-colic ligament tear resulting in entrapment and strangulation of intestine; as it has been reported earlier by McGowan (1981); Hosgood *et al.* (1992) and Hassinger (1997). Prognosis for intestinal incarceration depends on the degree of vascular obstruction and resulting systemic inflammatory response. If extensive areas of intestine are affected and the host immune response has been triggered by endotoxins, the prognosis is guarded to poor as also reported by Hassinger (1997).

Findings in the present case were similar to those reported earlier by Hassinger (1997), except for volvulus and mesenteric tear being noticed simultaneously at two different points of the GI tract in the same animal, causing intestinal entrapment and strangulation. Unlike earlier, the history and clinical signs were dated back to one month. It is in accordance to the report of Hassinger (1997) who narrated that the clinical signs in dogs with intestinal entrapment and strangulation caused by a rupture of the duodenocolic ligament included chronic vomiting, diarrhea, anorexia, and lethargy. Jejunal distension in this dog could be

attributed to the mesenteric volvulus, while distension posterior to the volvulus could be because of entrapment of a distal segment of ileum in a mesenteric tear. The volvulus could have been the reason of partial retention of contrast in the distended jejunum. The collapse of the animal could be attributed to the severe vascular compromise, circulatory and endogenic shock.

Mesenteric volvulus and even entrapment of intestine in a mesenteric tear should be strongly suspected in large-breed dogs with signs of intermitted vomiting and tarry faeces, distended and hyper motile intestines, and abdominal radiographs showing gas distended bowel loops with lack of contrast filling in distal intestine.

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