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VOLVULUS OF THE SMALL INTESTINE IN A CAT

Rıfkı Hazıroğlu[1], Nalan Karademir[2], Yılmaz Aydın[2]

Bir kedinin ince barsaklarında volvulus

Özet: *Bu raporda onsekiz aylık karışık ırk, erkek bir kedinin ince barsaklarında gözlenen volvulus tanımlandı. Tesadüfi nekropsi bulgusu olarak saptanan volvulusun barsak lumeninin parazitler nedeni ile tıkanması sonucu oluştuğu düşünüldü.*

Summary: *A case of volvulus of the small intestine in an* 18-*month-old, mixed breed male cat is described. It was considered that volvulus which was incidental necropsy finding might occur due to parasitic obstruction of the intestinal lumen.*

Introduction

In domestic animals, acute intestinal obstruction, due to volvulus of the intestine, occurs most frequently in the horse (1, 5, 6). It is rare in other species (2–5). In all species the result is rapid death (5). Intestinal torsion or volvulus in animals has fatal consequences and manifests itself at postmortem as gross gaseous distension of the affected bowel which is a vivid dark red colour. The veins are engorged and the intestinal wall is oedematous (4–6).

Volculus of varying lengths of the small intestine may occur in any species, but no report of volvulus of the cat intestine was found in a search of the literature.

1 Associate professor, Department of Pathology, Faculty of Veterinary Medicine, University of Ankara, 06110 Ankara.

2 Research asistant, Department of Pathology, Faculty of Veterinary Medicine, University of Ankara, 06110 Ankara.

Materials and Methods

An 18-month-old, mixed breed, male cat was examined. There was no history of previous illness. The symptoms the owner had observed for 24 hours in the cat were inappetance, no defecation, severe abdominal pain and vomitus. Necropsy was performed. After postmortem examination, various organ samples fixed in buffered 10 % neutral formalin and paraffin sections cut at 6 μm thickness were stained with hematoxylin and eosin.

Results

At necropsy, the abdomen was distended, and on opening the cavity, the tensely dilated deep red to black loops of bowel vere immediately apparent, and blood-stained content, approximately 15–20 cc in amounts, drained from the ventral commissure of the incision. The mesentery of the small intestine was involved in a torsion that was counterclockwise, when viewed from the ventrocaudal aspect (Fig. 1). There were congestive haemorrhages in the wall of the affected loops

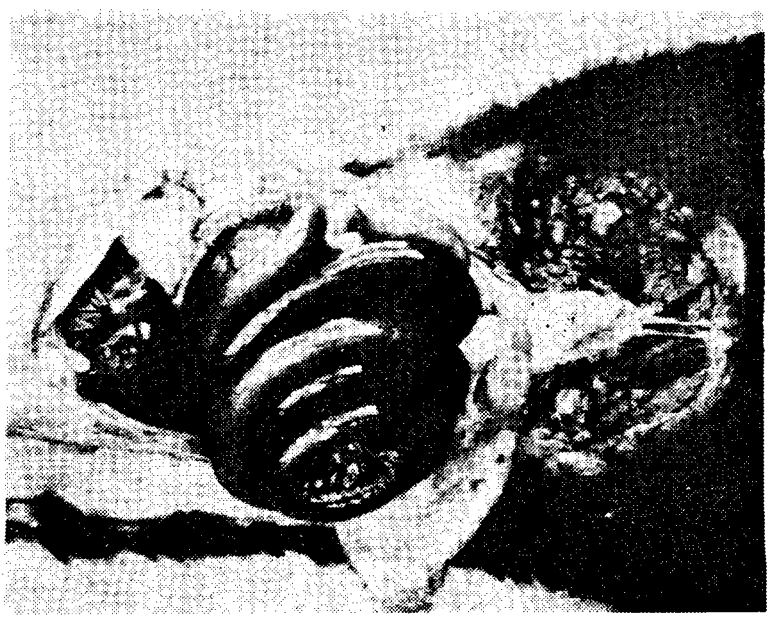

Fig. 1. Volvulus. Deeply congested loops of the small intestine
Şekil 1. Volvulus. İnce barsak halkalarında şiddetli hiperemi.

and the lumen contained gas, ingesta and blood. The intestinal tract above the volvulus was almost empty. Mesenteric lymph nodes were enlarged, congested, partly haemorrhagic and oedematous. The loops of the bowel involved extended from the duodenum to the ileocaecal junction of the intestine. There was a parasitic mass, including 37 Joyeuxilla pasqualei in the beginning part of the volvulus in the duodenum. There were no significant pathologic lesions in the other organs. The infarcted segments were sharply demarcated from normal ones. Microscopically, severe oedema, distension of veins, venous thromboses and haemorrhages were observed in all layers of some affected parts of the intestine. Some parts were necrotic, extending to the longitudinal and circular musculer layers.

Discussion and Conclusion

The hypothesis is advanced that volvulus, incarceration, strangulation and intussusception of the small intestine have a common pathogenesis. The two important factors are hyperperistalsis and temporary or permanent arrest of peristalsis in some segments of the intestine (segmental atony) (5, 6). In humans, predisposing factors are thought to include anatomic predisposition, bulky high diets, and strenuous physical exercise following meals. Freely moveable portions of intestine suspended by the mesentery undergo physiologic twisting and turning that could result in a volvulus (7). The obstruction due to a parasitic ball was observed in the duodenum. This may predispose to segmental atony in that part of the digestive tract or perhaps, which induces volvulus.

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