

Probiotic Utilization in Megacolona Dog : A Case Report

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Probiotic Utilization in Megacolona Dog : A Case Report

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Abstract

A five year old male beagel dog weighing 15 kg was presented with history of constipation, frequent vomiting after feeding, and abdominal pain for past 3 days to Veterinary Teaching Hospital of Airlangga University, Surabaya. Based on hematological analysis, normal X-ray

and contrast X-rayradiography, the dog was diagnosed with megacolon due to hard faeces accumulation in the colon. It was treated with fluid therapy using NaCl, combined with ranitidine, antasids, enrofloxacycin, and probiotic contained *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* (1×10^9 CFU/g per day). This treatment resulted good progress everyday, the dog was totally back

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to the normal condition after seven days.

Key words: Megacolon, Constipation, Probiotic, dog

2 Constipation in megacolon case is intractable constipation characterized by inability to evacuate the mass of dry, hard feces; impaction extending from the rectum to the ileocolic valve can result in pathological condition of hypomotility and dilatation of the large intestine resulting in constipation and obstipation. Usually this condition is treated by laxative drugs, enema and surgery to remove the mass inside colon, however probiotic utilization to cure such cases is documented in this case.

Case History and Observations

A five years old male beagle weighing 15 kg not-neutered male was presented to the Airlangga University Veterinary Teaching Hospital with the history of not defecating for three days and vomiting shortly after given feed. Physical examination revealed no sign of anemia, body temperature was normal (38.5°C), vomition of gastric juice with yellow color, abdominal palpation confirmed large hard feces in colon. X-ray examination with bariumsulfate (Fig 1) showed large faecal mass in the colon. The intestine was filled with gas, thickening of intestinal wall as well as colon, however no evidence of foreign body in stomach or intestine was observed.

Hematology and biochemical examination showed high level of leucocyte ($27.5 \times 10^9/L$) and monocyte (25.5%) and blood urea nitrogen/BUN (59.7mg/dl). However, the level of BUN

was slightly increased due to dehydration due to delayed transportation of four hours from owner's home to the hospital.

Treatment and Discussion

Enema was given using glycerin 10 ml continued with fluid therapy normal saline 400 ml intravenous route on the first day combined with ranitidine 30 mg (2mg/Kg Body weight), antacids 5 ml (each ml contains of dimethylpolysiloxane 80 mg – aluminium hydroxide 200 mg – magnesium hydroxide 200 mg) at every 8 hours *ante coenam* and 60 mg enrofloxacin every 12 hours. Probiotics in combination of *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* (1×10^9 CFU/g) was given for 2 days every 24 hours. Surgery option was not considered since the dog was able defecate liquid feces. The probiotic has been given to increase colon motility on day 2 after the enema therapy. The hard fecal mass successfully voided on the next day, the patient was able to defecate normally after seven days of treatment and recovered uneventfully.

In this case the probiotic treatment was able to accelerate intestinal mobility by decreasing methane production (Pathasarathy *et al.* 2016) and (Furnari *et al.* 2012). Various *Lactobacillus* sp., *Bifidobacterium* sp. Strains could improve gut transit time, stool frequency and consistency, and flatulence (Dirlikli *et al.* 2014). Furthermore, it has been shown to interact with the gut-brain axis in rats through the modulation of afferent sensory nerves that influence gut motility (Kunze *et al.* 2009; Dimidi, *et al.* 2017).

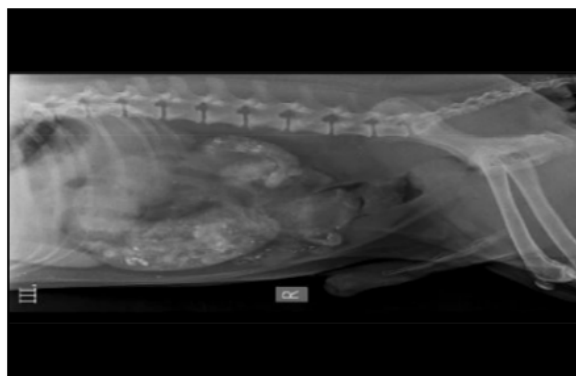


Fig I. Megacolon with hard faeces on day 1st



Fig II. Normal colon after treatment day 7th

Summary

The dog was diagnosed with megacolon due to obstipation which was treated with Probiotics containing *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* a potential supportive drugs to accelerate intestinal transit by decreasing methane production.

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