

Clinical management of gastrointestinal tumor in a rottweiler

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ABSTRACT: Gastrointestinal neoplasia is an increasingly recognized condition in dogs, particularly in predisposed breeds, such as Rottweilers. A 4-year-old Rottweiler was presented by its owner to the Veterinary Teaching Hospital, School of Veterinary Medicine and Biomedical Sciences, IPB University, with clinical signs including coughing, dyspnea, lethargy, and intermittent yellow-brown, malodorous feces. Diagnostic evaluations revealed significant abnormalities in the respiratory and gastrointestinal systems. This report describes the clinical presentation, diagnostic approach, and management of a dog with suspected gastrointestinal neoplasia. The patient was provisionally diagnosed with gastrointestinal neoplasia with a poor prognosis. Although surgical intervention is generally recommended, the compromised pulmonary function of the dog precluded general anesthesia; therefore, management was limited to symptomatic and supportive therapy.

Keywords:

neoplasia, gastrointestinal, rottweiler

■ INTRODUCTION

Gastrointestinal neoplasia in dogs, particularly in the Rottweiler breed, is an increasingly recognized condition in veterinary practice. These neoplasms encompass a wide spectrum of tumors affecting the gastrointestinal tract, including the stomach, small intestine, and large intestine. Rottweilers are predisposed to several health problems, which may contribute to their heightened risk of developing such conditions (Simeoni *et al.* 2020).

In dogs and cats, gastrointestinal neoplasia involves abnormal cellular proliferation in the digestive tract, which may be either benign or malignant. These growths can impair digestion, compromise nutrient absorption, and occasionally cause intestinal obstruction. Tumors may originate from various cell types, including lymphoid (lymphoma), epithelial (adenocarcinoma), and smooth muscle cells (leiomyoma). The risk factors include genetic predisposition, advanced age, and exposure to carcinogens. Clinically, affected animals often present with nonspecific but progressive signs, such as vomiting, diarrhea, weight loss, and anorexia (Schwartz *et al.* 2022). This study aimed to report a clinical case of gastrointestinal neoplasia in a Rottweiler, focusing on the clinical manifestations, diagnostic process, and therapeutic management.

■ CASE

Signalment and History: Donut, a 4-year-old female Rottweiler weighing 33.6 kg, presented to the Veterinary Teaching Hospital, School of Veterinary Medicine and Biomedical Sciences IPB University, Bogor, Indonesia. The owner reported coughing, dyspnea, lethargy, and intermittent yellow-brown, and foul-smelling feces. Over five months, the dog had recurrent vomiting and was previously treated for a respiratory disorder at another clinic with antibiotics and anti-fungal agents. The owner noted that both the dam and grand-sire died of cancer, suggesting a familial predisposition.

Physical Examination: Abdominal palpation revealed epigastric pain. **Diagnostic:** Ultrasonography, radiography, blood smears, hematology, and serum biochemistry were used to confirm the diagnosis. **Diagnosis:** Gastrointestinal neoplasm. **Prognosis:** Grave. **Treatment:** Included nebulization with Ventolin, Bisolvon, and 0.9% NaCl, plus aminophylline (300 mg for 10 days, then 300 mg for 7 days), furosemide (40 mg for 28 days, 160 mg for 5 days), spironolactone (25 mg for 20 days), aspartate (300 mg for 4 days), Lypex (1,200 mg for 5 days), and ubiquinone (200 mg for 3 days).

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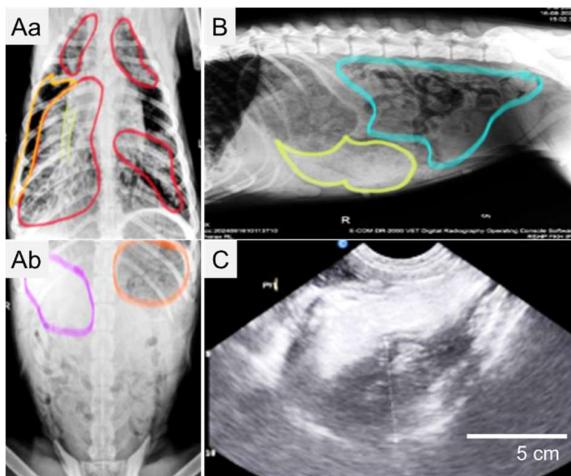


Figure 1. Diagnostic imaging of the abdomen. (A) Ventrodorsal X-ray view (Aa and Ab); (B) Right lateral X-ray view; (C) Ultrasonography of the pylorus showing a mass.

■ RESULTS AND DISCUSSION

Thoracic radiography revealed a bronchial pattern suggestive of bronchitis and an increased vascular pattern consistent with congestive heart failure. Abdominal imaging identified a radiopaque mass in the pyloric region of the stomach, which was suspected to represent either a neoplasm or an obstruction, along with evidence of gas accumulation, indicating gastrointestinal narrowing. Further ultrasonographic evaluation confirmed the presence of a “honeycomb-like” mass in the pyloric region, accompanied by gastric wall thickening and reduced motility; both the small and large intestines appeared normal.

The therapeutic regimen administered at the Veterinary Teaching Hospital, School of Veterinary Medicine and Biomedical Sciences IPB University, primarily involved symptomatic and supportive management of the disease. Nebulization with salbutamol and bisolvon, combined with aminophylline, was employed to alleviate respiratory distress and deliver medication directly to the airways. Spironolactone and furosemide were prescribed to stabilize the blood pressure and control fluid retention, given that the increased vascular and bronchial patterns observed on radiographs may result from hypertension or pulmonary edema. Diuretics are also used to prevent fluid accumulation in areas affected by gastrointestinal neoplasia (Rossignol *et al.* 2018).

Aspartate was administered orally twice daily after meals to aid recovery of impaired liver function. Lypex, a specialized digestive supplement, was provided to support pancreatic function, particularly in response to intermittent yellow-brown malodorous feces, which suggested digestive insufficiency (Mas *et al.* 2012). Konilife Co Q10 was prescribed as an antioxidant to reduce oxidative stress and provide protective effects against cancer. Coenzyme Q10 has been reported to support pancreatic and hepatic health and enhance immune function (Druzhaeva *et al.* 2022).

Management is limited to symptomatic and supportive care. Surgical resection is the treatment of choice when the tumor can be completely removed with acceptable morbidity.

However, extensive pulmonary compromise in donut poses a significant anesthetic risk, as reduced lung function increases intraoperative and perioperative complications. Studies have shown that surgical excision, when feasible, followed by chemotherapy, may improve outcomes in patients with MPM. Chemotherapeutic protocols include carboplatin, 5-fluorouracil, doxorubicin, cyclophosphamide, mitoxantrone, and gemcitabine, which disrupt DNA synthesis in cancer cells (Araújo *et al.* 2022).

However, chemotherapy and radiotherapy show limited efficacy and substantial toxicity. Therefore, palliative care was recommended to maintain the quality of life while minimizing risks. In Donut, nebulization and aminophylline provided respiratory relief, whereas spironolactone and furosemide aided in blood pressure regulation and fluid balance. Supportive agents, such as aspartate and Lypex, promote hepatic and digestive functions, whereas Coenzyme Q10 serves as an antioxidant supplement (Khan *et al.* 2023).

■ CONCLUSION

A 4-year-old female Rottweiler (Donut) with suspected gastrointestinal neoplasia received supportive treatment for respiratory, circulatory, and digestive problems. A definitive diagnosis was not confirmed because of the lack of biopsy.

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