

# COLOPEXY AS A TREATMENT FOR RECURRENT RECTAL PROLAPSE IN A DOG

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Colopexy was evaluated as a treatment for recurrent rectal prolapse in a male German shepherd dog. Simple suture colopexy technique used to treat the condition failed 6 weeks after the initial treatment. This was followed by incisional colopexy technique which prevented recurrence during the three month follow-up period. It may be concluded that incisional colopexy technique is effective in preventing recurrent rectal prolapse.

**Keywords:** Colopexy, dog, rectal prolapse

## Introduction

Rectal prolapse is usually a consequence of underlying disorders that produce severe or persistent straining. It may be associated with intestinal diseases that cause diarrhoea and tenesmus, anorectal diseases that produce constipation and dyschezia, or lower urinary tract diseases that cause stranguria and dysuria (Papovitch *et al.*, 1994; Gilley *et al.*, 2003). Rectal prolapse occurs most commonly in young, parasitized dogs and cats. Recurrent prolapse that is unresponsive to reduction and placement of a purse string suture may require colopexy (Gilley *et al.*, 2003). The present study reports a case of recurrent rectal prolapse in which simple suture technique failed to correct the prolapse while incisional technique produced successful result.

## History and Clinical findings

A 6-month-old intact male German shepherd cross-bred dog, weighing 8 kg was presented to the Surgery Unit of the Referral

Veterinary Polyclinics, Indian Veterinary Research Institute, Izatnagar, Uttar Pradesh, India, with a 15 days history of recurrent rectal prolapse (Fig. 1). The prolapse would recur frequently and was managed by the referring veterinarian with reduction of the prolapse and anal purse string sutures on four occasions.

## Surgical Treatment

The dog was fasted for 24 hours and water was withheld for 12 hours prior to surgery. Premedication was done with atropine sulphate (0.04 mg/kg intramuscularly), ceftriaxone (25 mg/kg intravenously), pentazocine (1 mg/kg intravenously), and diazepam (0.5 mg/kg intravenously) approximately 30 minutes prior to surgery. Anaesthesia was induced and maintained by intravenous thiopental sodium. The dog was positioned in dorsal recumbency, and the ventral abdomen was prepared for aseptic surgery. Left sided caudal paramedian ventral celiotomy was performed



Fig 1: Rectal prolapse in a male crossbred GSD pup

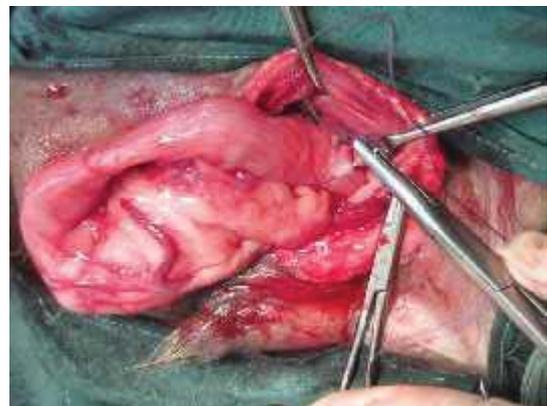


Fig 2: Intraoperative image showing attachment of descending colon to the left abdominal wall



**Fig 3: Intraoperative image showing longitudinal incision through serosal layer of descending colon**



**Fig 4: Intraoperative image showing attachment of incised serosal fold to the left abdominal wall**

The descending colon was then sutured to the left abdominal wall (Fig. 2) approximately half the distance between the linea alba and the sublumbal muscles by use of 2 longitudinal rows of 6 simple interrupted sutures per row with 2-0 polyglactin 910 (Ethicon). Sutures were placed 5 to 10 mm apart in a ventral to dorsal direction through the transverse abdominal muscle and in a transverse direction through the colon. Beginning dorsally, rows were kept approximately 5 mm apart with the first row of sutures placed along the antimesenteric border. Sutures were placed through the seromuscular and submucosal layers only in an effort to avoid entering the lumen of the colon. Initially the animal showed recovery but prolapsed recurred after a period of six weeks. After the recurrence, the animal was prepared for the surgery again and anaesthetised using the same anaesthetic protocol as used earlier for first surgery. Caudal paramedian ventral celiotomy was performed at the same site and colon was exteriorised. A longitudinal incision was made on serosal layer of the descending colon (Fig. 3). Serosal flaps were then sutured to the left abdominal wall using 2-0 nylon suture, similar to aforementioned technique (Fig. 4). After completion of the colopexy, light caudal traction was applied to the colon to evaluate the integrity of the attachment. The colon was firmly attached to the body wall, with no caudal movement during gentle traction.

#### **Post-operative Care and Outcome**

Postoperative analgesia was provided by meloxicam (0.2 mg/kg intramuscularly, once daily) for three days. Ceftriaxone (10 mg/kg intramuscularly, twice daily) was administered for five days. The antiseptic

dressing of the suture line was performed with povidone iodine solution for 10 days. Skin sutures were removed on the 10<sup>th</sup> postoperative day.

#### **Discussion**

After first colopexy recurrence of prolapsed was recorded six weeks later, which may be attributable to the absence of formation of adequate adhesions between the colon and the abdominal wall. However, after second colopexy no recurrence was reported and animal showed complete recovery. Colopexy is a preferred surgical technique for treating recurrent rectal prolapsed that fail to respond to multiple attempts at purse-string suture. Intestinal functions are not adversely affected by this technique (Popovitch *et al.*, 1994). Following colopexy permanent fibrous adhesions occur and reduction of the prolapsed mass is maintained (Mattieson, 1985). Although both simple suture technique (Simon *et al.*, 2009; Amarpal *et al.*, 2010) and incisional technique colopexy are reported to be effective in preventing recurrent rectal prolapsed (Mattieson, 1985; Popovitch *et al.*, 1994), however, in the present case simple suture technique was not effective but incisional technique prevented recurrence possibly due to formation of firm adhesions between the colon and the abdominal wall.

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