Surgical management of rectal diverticulum in a German shepherd dog


Abstract
A case report of 9 year old, intact male German shepherd dog, weighing about 33 kgs was presented to the B&G Pet Clinic, chandanagar, Hyderabad, Telangana, with the condition of dyschezia and swelling on the left perineal region and the condition was diagnosed as the rectal diverticulum by rectal examination and radiography. The objective of this report is to describe a surgical technique for treatment of rectal diverticulum through lateral resection in a dog with perineal hernia, whereby restoring the rectal integrity.

Keywords: Dyschezia, German shepherd dog, rectal diverticulum

Introduction
Persistent pushing against wall of rectum by faeces makes the rectal wall weak and stretched causing bulge and pocket formation which ultimately turns into sacculated larger diverticulum (asymmetrical enlargement of rectal diameter and disruption of muscularis layer of rectum followed by protrusion of rectal mucosa through seromuscular layer of rectal wall). It occurs in male dogs over 6 years of Age [3]. Radiographic findings of rectal dilation or sacculcation are characterized by an external and intact pouch on the rectum wall [2]. The present case report describes the successful repair of rectal diverticulum in a German shepherd dog through lateral resection.

History and Diagnosis
A 9 year old male intact German sheperd was presented with a history of a swelling around the tail area (Fig. 1), dyschezia and tenesmsus since the last 3 months. The fecal matter has been scanty and improper for this period of time. A per-rectal examination revealed impacted fecal masses in a diverticulum which was confirmed on radiography (Fig. 2). Physical parameters like temperature, respiration and pulse were within the normal range and the case was subjected to correct the condition surgically.

Surgical technique
The dog was prepared for surgery after aseptic preparation of peri-anal area. The dog was preanesthetised with atropine sulphate @ 0.04 mg/kg, Xylazine hydrochloride @ 1 mg/kg and maintained with combination of Ketamine hydrochloride and Diazepam @ 5 mg/kg and 0.5 mg/kg respectively. The dog was positioned in sternal recumbence with tail pulled sideward and tied to the edge of operation table. The table should be slightly inclined so the perineal region remains elevated and lubricated syringe is inserted into the anus to help in identifying the rectal lumen during surgery. A skin incision is performed on the affected side, parallel to the anus and extending ventrally to the ischial tuberosity. After dissection of the subcutaneous tissue, the hernial contents were reduced and maintained with gauze. The rectum and rectal sacculcation (Fig. 3) were identified through digital palpation. The rectal sacculcation was retracted and clamped withatraumatic intestinal forceps taking care to protect the rectal lumen, which can be identified by the presence of the syringe. Interrupted absorbable suture was placed passing through all the intestinal layers. When the suture was complete, the clamped intestinal portion corresponding to the sacculcation was resected. Subsequently, an inverting Cushing absorbable suture was placed (Fig. 4), carefully releasing the forceps as the suture progresses. Postoperative antibiotic treatment was constituted using Ceftriaxone @ 20 mg/kg for five days, Meloxicam @ 0.5 mg/kg for three days and oral administration of stool
softening agent cremaffin @ 2 teaspoonful twice daily. Suture line was dressbed daily with betadine. Skin suture were removed on 12th day.

**Result and Discussion**

The animal had good recovery from the surgery. Rectal diverticulum was reported by Szabo and Bilkai\(^6\) and Pekcan et al\(^5\). They described plication or pleating or reverse U technique for rectal correction. For the correction of rectal diverticulum, the mainstay of rectal resection is to excise the diverticulum segment of the rectum and reappose it to the healthy rectum using a anal approach which is suitable lesions involving the caudal rectum\(^3\). Similar case was reported by Basavanagowda et al\(^1\), Castration was not decided here as prostrate size was normal. Regular deworming and laxative diet proved well with weight gain and normal appetite to good health with no report of recurrence up to 2 years of post-operative period in this dog. Overall, the success rate and client satisfaction makes the lateral resection technique for rectal diverticulum is a preferable procedure in dogs.

**Fig.1:** left side perianal swelling.

**Fig. 2:** Radiograph demonstrating fecal collection

**Fig. 3:** Rectal sacculation was exposed

**Fig.4:** Cushing suture is being completed

**References**