International Journal of Veterinary Sciences and Animal Husbandry

ISSN: 2456-2912
VET 2023; 8(5): 335-337

www.veterinarypaper.com
Received: 05-07-2023
Accepted: 04-08-2023

M Vijaya Kumar
Assistant Professor, Department of Veterinary Surgery and Radiology Veterinary College and Research Institute, Namakkal, Tamil Nadu, India

A Arun Prasad
Professor, Department of Veterinary Surgery and Radiology, MVC, Chennai, Tamil Nadu, India

P Tamilmahan
Assistant Professor Department of Clinics, MVC, Chennai, Tamil Nadu, India

S Senthil Kumar
Professor and Head, Department of Veterinary Surgery and Radiology, Thalaivasal, Salem Tamil Nadu Veterinary and Animal Science University, Chennai, Tamil Nadu, India

Corresponding Author:
M Vijaya Kumar
Assistant Professor, Department of Veterinary Surgery and Radiology Veterinary College and Research Institute, Namakkal, Tamil Nadu, India

Surgical management of perineal hernia with rectal diverticulum in a spitz dog: A case report

M Vijaya Kumar, A Arun Prasad, P Tamilmahan and S Senthil Kumar

DOI: https://doi.org/10.22271/veterinary.2023.v8.i5f.759

Abstract
The present study reports a case of 10 years old uncastrated male spitz dog with a history of right side perineal swelling dschsia and tenesmus since 2 months. Based on the history cinical sign, palpation and contrast radiography the case was diagnosed as perineal hernia with rectal diverticulum. Surgical resection of the sacculation along with perineal herniorrhaphy was performed with a successful clinical outcome.

Keywords: Perineal hernia, rectal diverticulum, herniorraphy, contrast radiography

Introduction
Perineal hernia may be unilateral or bilateral and results from weakening and separation of the pelvic diaphragm muscles, favoring the abdominal viscera herniation into the perineal subcutaneous. The factors described as possible etiology of this affection are prostate hyperplasia, senile muscular atrophy, myopathy and hormonal imbalances. (A.G. Sprada *et al*., 2017) [1] Rectal diverticulum is an out-pouching of rectal mucous membranes through an abnormal opening in the overlying perineal muscle layers, found commonly in middle aged, male dogs (Saulnier Troff *et al*., 2008) [6]. It may exist alone, or along with perineal hernia, but most often it has been described as a sequel to perineal hernia (Krahwinkel DJ 1983) [5] If the diverticulum is not treated properly, this condition is severe and can lead to fecal accumulation and impaction in the sacculation, which may lead to impaired defecation and persistent straining; consequently, these will further predispose to recurrence of the perineal herniation (Orsher RJ 1986) [7]. Neither conservative treatments nor classical herniorrhaphy techniques is desirable for the treatment of this condition. The present case report describes a successful repair of rectal diverticulum by resection with herniorrhaphy in a spitz dog through lateral approach.

Case history and clinical observation
A 10 years old uncastrated male spitz dog weighing 12 kg was presented with a history of right side perineal swelling (Fig.1) dschsia and tenesmus since 2 months. Based on the history cinical sign, palpation and contrast radiography the case was diagnosed as rectal diverticulum with perineal hernia (Fig.2). On digital rectal examination, perineal hernia with rectal distention containing large quantity of faeces on the right pelvic and out-pouching was palpated at the right lateral aspect of the rectal wall. Clinically, the animal was apparently healthy and all the clinical parameters and haemograms (rectal temperature, pulse rate, respiratory rate and CBC) were within the normal physiological limits. Plain radiography revealed a faecal material and gas-filled sac in the right perineal region whereas, a marked solitary diverticulum arising from the right lateral wall of the rectum was observed in positive contrast radiography using barium sulfate per orally. Therefore, surgical resection by using lateral approach and herniorrhaphy.

Treatment and Discussion
Pre-operatively, food and water was with held for twenty four hours, respectively prior to

surgery.

A laxative preparation (cremaffin) was also given 24 hours before the operation followed by warm water enema mixed with liquid paraffin before the operation colonic evacuation and complete cleansing. After the surgical site was prepared aseptically, the dog was premeditated with atropine sulphate at a dose rate of 0.02 mg/kg, injected Subcutaneously xylazine at a dose rate of 1 mg/kg I.M General an aesthesia was ketamine at dose rate of 5 mg/kg BW I.V, and Maintenance was done under Isoflurane 1.5% respectively After placing the animal in sternal recumbency, a skin incision of about 3 to 4 inches was made in curvilinear fashion laterally on the right side of the anus. The fascia was separated and subcutenous tissues along with the associated muscles were bluntly dissected to expose the pelvic diaphragm avoiding the rectal nerve. (Fig 3a &3b) Through digital palpation, the rectal sacculation Interrupted absorbable suture pattern was placed passing through all the intestinal layers to resect the outpouching layer using polyglactin-910 suture material (vicryl 2-0). Subsequently, a second layer of another inverting Cushing suture was placed while carefully removing the intestinal forceps as the suture progresses in a parallel fashion towards the direction of rectal lumen. Herniorrhaphy was again done using a conventional method by suturing the internal obturator muscle to the external anal sphincter, followed by reap position of external anal sphincter and the levator ani muscle in an interrupted suture pattern using polyamide1.0 suture material. Finally, subcutaneous tissues and skin were closed in a routine manner. Postoperatively, a course of antibiotic (Inj. ceftriaxone @ 20mg/Kg BW, IV) once daily for seven days and injection meloxicam (@ 0.2 mg/Kg BW, IM) once daily for three days were given along with fluid therapy. Initially, a stool softener (lactitol monohydrate) was given for 3 weeks along with abland, low-fat diet mixed with vegetables and a normal diet was gradually reintroduced until the animal could finally eat and defecate normally. Skin suture was removed after 10 days and the dog recovered uneventfully without any complications (Fig. 4a and 4b).

Perineal hernia is a condition which occurs mainly when the pelvic cavity muscles rupture resulting from failure of the pelvic diaphragm to support the rectal wall, through which there is caudal displacement of some of the anatomical structures, such as rectal, pelvic or abdominal contents, indicated by swelling of the perineal region and impaired defecation (Hedlund CS). When there is weakness and rupture of muscular layer of the rectal wall, it may result to protrusion of mucosa and submucosa into the pelvic canal, causing rectal diverticulum, which was observed in this case. Persistent pressure against the rectal wall by impacted fecal material makes the rectal wall weakened and stretched causing to bulge and pocket formation; ultimately, turns into larger sacculated diverticulum. Reports suggested that it occurs commonly in middle aged male dogs over 6 years of age (Hedlund CS), with the present animal being 10 years of age. The diagnosis of this clinical condition is usually based on history, clinical signs and symptoms, physical examination, digital palpation and radiographic findings (Dean PW *et al*. 1996) [3]. After both plain and contrast technique, radiographic findings demonstrated rectal dilation or sacculation characterized by an external and intact pouch on the right lateral aspect of rectum wall (Bojrab *et al*. 1981) [2], suggesting rectal diverticulum with perineal hernia. Several surgical techniques have been employed by various surgeons for the treatment of rectal diverticulum in dogs. However, conservative treatment or classical herniorrhaphy techniques alone will not give a successful clinical outcome without repairing the diverticulum because the large rectal diverticulum will be soon filled with faeces and cause straining, which will lead to disruption of the perineal hernia repair and recurrence of the perineal swelling (Saulnier-troff *et al*. 2008) [6]. This is considered to be the reasons which accounts for the high recurrence rates as previously reported. As a result, we have performed complete surgical resection of the rectal diverticulum or sacculation to prevent its recurrence. During diverticulectomy or sacculectomy, there is always a risk of possibility of post-operative contamination due to opening the rectal wall during the surgery (Vnuk *et al*. 2008) [8] however, such infection was controlled in our study with good antibiotic coverage.

Fig 1: Right perineal swelling was noticed

Fig 2: Rectal diverticulum with perineal hernia

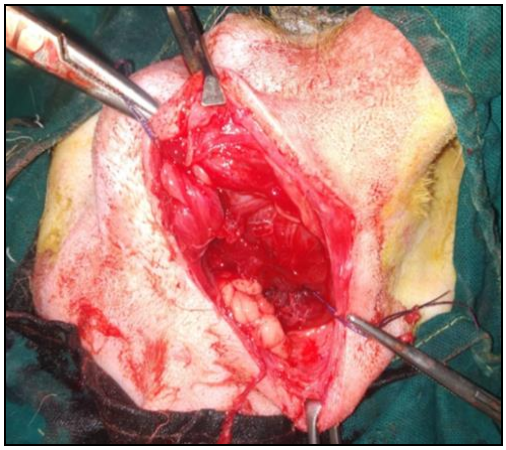

Fig 3a: Intraoperative Procedure

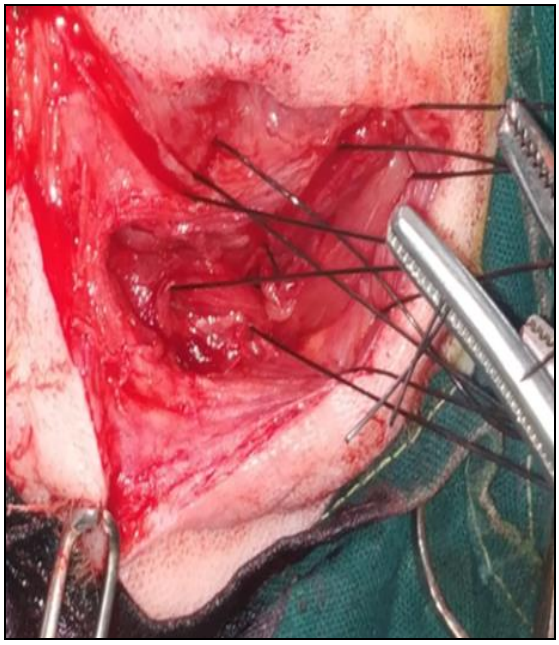

Fig 3b: Intraoperative procedure

Fig 4a: Post operative x-ray

Fig 4b: After complete recovery

Conclusion

Early approach of surgical intervention of diverticulectomy using lateral approach and perineal herniorrhaphy showed excellent result and successful clinical outcome.

References

1. Sprada AG, Huppes RR, Feranti JPS. Perineal Hernia in Dogs: Acta Scientiae Veterinariae. 2017;45(Suppl 1):244.
2. Bojrab MJ, Toomey A. Perineal herniorrhaphy Compend. Contin. Educ. Pract. Vet. 1981;8:8-15.
3. Dean PW, Bojrab MJ. Hernia Perineal. In: Bojrab MJ (Ed). Tecnicas Atuasis em Cirurgia Veterinaria 3 ed. Sao Paulo: Rocca; c1996. P. 410-421.
4. Hedlund CS. Surgery of the Perineum, rectum and anus. In: Small animal Surgery 2nd Ed. Fossum, T.W (Ed) Mosby. p. 433-437.
5. Krahwinkel DJ. Rectal diseases and their role in perineal hernia. Vet. Surg. 1983;12(3):160-165.
6. Saulnier-troff FG, De-busscher V, Hamaide F. Acute gaseous peritonitis after rupture of a retroperitoneal rectal diverticulum in a dog. J Small Anim. Prac. 2008;49(7):356-358.
7. Orsher RJ. Analysis of results of internal obturator transposition. Vet. Surg. 1986;15:253-258.
8. Vnuk D, Lipar M, Maticic D, Smolec O, Pecin M, Brkic A. Comparison of standard perineal herniorraphy and transposition of the internal obturator muscle for perineal hernia repair in the dog. Vet. Arhiv. 2008;78(3):197-207.