

SURGICAL MANAGEMENT OF AN UNUSUAL CASE OF PERINEAL HERNIA IN A DOG

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Introduction

Perineal hernia is protrusion of the abdominal organs into the perineal area through the weak pelvic diaphragm and the disease has been reported to occur most commonly in old and uncastrated male dogs and is associated with constipation, obstipation, dyschezia, a soft perineal swelling and occasionally urination problems. Straining to defecate and perineal swelling are the most consistent clinical signs (Bojrab and Toomey, 1981). The swelling is present ventrolateral to the anal opening and may be unilateral or bilateral. Chronic tenesmus may lead to caudal displacement of the prostate gland and urinary bladder. The cause of the muscular deterioration of the pelvic diaphragm could be one or combination of various pathological processes like muscular atrophy, myopathies, hormonal imbalance and prostatic hypertrophy (Bellenger and Canfield, 2002). Rectal diseases that may play a role in perineal herniation include rectal deviation,

rectal sacculatation and rectal diverticulum (Mann, 1993). The present communication puts on record an unusual case of perineal hernia in a dog and its successful surgical management.

Case history and observations

A 9 year old, spitz dog was presented to the Referral Veterinary Polyclinic, IVRI, Izatnagar with a history of dyschezia, vomiting, anorexia and difficulty in urination since 10 days along with a large swelling just below the anal opening (Fig. 1). The clinical examination of the patient revealed normal rectal temperature (101.9⁰ F), heart rate (96 beats per min) and respiratory rate (24 per min). Physical examination of the swelling confirmed it to be a case of perineal hernia consisting both of soft as well as hard contents in the herniated mass. Hence, it was decided to perform perineal herniorraphy for replacement of herniated organs and correction of damaged muscles of pelvic diaphragm.



Fig. 1: Preoperative view of perineal hernia



Fig. 2: Aspiration of urine from the herniated bladder

Surgical procedure

The animal was premedicated with atropine sulphate @ 0.04 mg/kg body weight subcutaneously followed 10 minutes later by pentazocine @ 1mg/kg and diazepam @ 1 mg/kg given intravenously. General anesthesia was induced with 2.5% thiopentone sodium @ 15 mg/kg body weight given to effect. The animal was then intubated and positioned in ventral recumbency with the tail pulled sideways and tied to the edge of operation

table with a cotton bandage. A purse string suture was applied around the anus to prevent accidental contamination of the surgical site. A slightly curved dorsoventral skin incision extending laterally from the base of the tail to the medial angle of the ischial tuberosity was made. Upon separation of subcutaneous tissue, the herniated organs (urinary bladder and intestines) were identified and returned to their anatomic locations. The bladder seemed to be tense and hence urine was aspirated out for

easy repositioning of the bladder (Fig. 2). The hernia ring was closed in a two layer suturing pattern. Firstly, the damaged muscles of the pelvic diaphragm were apposed followed by a second layer of suture applied between the subcutaneous tissue and the external anal sphincter using PGA No. 1 (Fig. 3). The skin incision was approximated by horizontal mattress using braided silk (Fig. 4).



Fig. 3: Closure of pelvic diaphragm muscles



Fig. 4: Completion of perineal herniorrhaphy procedure

Discussion

Perineal hernia in dogs has been most commonly reported to occur on the right side (Head and Francis, 2002). There is convincing evidence that the risk of perineal hernia recurrence for non-castrated dogs is 2.7 times greater than that for castrated dogs (Hayes *et al.*, 1978). Dogs with benign prostatic hyperplasia have been found to have increased relaxin levels and suspected subsequent weakening of the pelvic diaphragm (Niebauer *et al.*, 2005). Hence, it is advisable to perform castration whenever prostatomegaly is diagnosed in a dog to eliminate the effect of relaxin on perineal hernia pathogenesis (Merchav *et al.*, 2005).

Temporary alleviation of perineal hernia may be obtained from conservative management including the use of stool softeners, periodic enemas and manual fecal removal (Bojrab and Toomey, 1981). However, most cases require surgical treatment to prevent life-threatening complications from the incarceration of herniated organs, especially the urinary bladder. The procedure of appositional herniorrhaphy which was performed in the present clinical case is a very old technique and gives rewarding results (Orsher, 1986). However, there are several reports which report recurrence rates of 10 to 46% with this conventional technique (Vnuk *et al.*, 2008). Closure of the hernia defect by transposition of the superficial gluteal muscle (Spreull and

Postoperative antibiotic therapy was constituted using ceftriaxone @ 20 mg/kg, analgesic meloxicam @ 0.5mg/kg and oral administration of stool softening agent cremaffin @ 2 teaspoonful twice daily. The suture line was dressed twice daily with betadine and cleaning of the anal opening was performed after every defecation of the animal. Skin sutures were removed on 14th day postoperatively.

Frankland, 1980), semitendinosus muscle (Chambers and Rawlings, 1991) and fascialata (Bongartz *et al.*, 2005) has been reported by various surgeons. Similarly synthetic materials like polypropylene mesh have also been used successfully for repair of perineal hernia in dogs (Szabo *et al.*, 2007).

However, in assessing the success of the perineal herniorrhaphy procedure, not only the reherniation but also the postoperative comfort of the animal should be determined (Orsher, 1986). Rectal abnormalities have potential for continued straining which can lead to failure of the surgical procedure. Perineal wound infection is the most common complication described after the perineal herniorrhaphy, ranging from 27 to 45 % of cases (Sjollema and van Sluijs, 1989), and it mainly results from contamination of the wound by faeces and inappropriate closure of the dead space. However, in the present case no such recurrence was reported and animal started normal defecation after 7 days and no recurrence was reported over a period of 6 months postoperatively. Hence, it was concluded that conventional technique can be used successfully for surgical management of clinical cases of perineal hernia in canine patients.

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