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Surgical management of inguinal hernia in Pomeranian bitch: A case report

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Abstract

A six year old Pomeranian intact female dog was presented in Veterinary Clinic Complex, PGIVER, Jaipur, with a history of non-painful, non-reducible pendulous unilateral swelling (left side) on the caudal inguinal region. Barium contrast radiography of abdomen revealed protrusion of intestinal loops into the inguinal swelling confirming inguinal hernia. Herniorrhaphy of the inguinal hernia was performed under xylazine, propofol and isoflurane anaesthesia. The hernial ring was sutured using overlapping mattress suture pattern using PGA no. 2/0. Intravenous Ringer's Lactate solution @ 10 ml/kg body weight, Meloxicam @ 0.2 mg/kg body weight and Ceftriaxone @ 50 mg/kg body weight were administered preoperatively. Postoperatively the dog was treated with intramuscular injection of Ceftriaxone @ 25 mg/kg body weight twice a day for 5 days and Meloxicam @ 0.1 mg/kg body weight once a day for 3 days. Syrup multivitamin Multistar pet was given @ 3ml BID PO for 10 days. Sutures were removed on 12th postoperative day and the animal had an uneventful recovery.

Keywords: Contrast radiography, enterocele, herniorrhaphy, Pomeranian bitch, unilateral inguinal hernia

Introduction

An inguinal hernia is a protrusion of an organ or part of an organ, fat or tissue through the inguinal ring, i.e. the region in the groin where the abdominal musculature meets the back legs. Factors potentially involved in the development of inguinal hernias may be anatomical, hormonal, and/or metabolic in nature; however the causes of inguinal herniation in small animals are poorly understood [1]. Contents of inguinal hernia may include omentum, fat, ovaries, uterus, small intestine, colon, bladder or spleen. These hernias are often chronic and do not cause clinical signs until pregnancy or pyometra develops [2]. For the surgical correction of the condition, either conventional method of incising through the ring or through ventral midline incision can be adopted [3, 4]. The present case report describes the successful surgical management of unilateral inguinal hernia in a Pomeranian bitch.

Case History and Clinical Findings

A 6 year old intact Pomeranian bitch was presented in Veterinary Clinic Complex, PGIVER, Jaipur with a left sided unilateral swelling in the inguinal region. As per history and physical examination it was non-painful, non-reducible pendulous swelling on the caudal abdomen (Fig. 1). Clinical examination revealed: normal heart rate, respiratory rate and rectal temperature. General condition, appetite, CRT (capillary refill time) and hydration status were also normal. Barium sulphate contrast radiography of abdomen revealed protrusion of intestinal loops into the inguinal swelling confirming inguinal hernia (Fig. 2). The condition was diagnosed as inguinal enterocele and it was decided to correct it by surgical intervention.

Surgical Treatment and Discussion

Pre-operative administration of Ringer's Lactate @ 10 ml/kg, Ceftriaxone @ 50 mg/kg and Meloxicam @ 0.2 mg/kg body weight was done intravenously. Premedication with injection atropine sulphate @ 0.03 mg/kg body weight and inj. xylazine hydrochloride @ 1.0 mg/kg body weight was done. General anaesthesia was induced by using inj. Propofol @ 5 mg/kg body weight. The anaesthesia was maintained with 2.0% isoflurane inhalation. The site was prepared aseptically and animal was kept in dorsal recumbency.

An elliptical incision was made over swollen area on skin and hernial sac and ring were exposed by blunt dissection of the subcutaneous tissue (Fig. 3). After making an incision the hernial contents that included intestines and its loop were exposed (Fig 4). Intestinal loops were gently reduced back into the abdominal cavity (Fig. 5). The base of the hernial ring was freshened and sutured with overlapping mattress suture pattern using Polyglactin 910 no. 2/0 suture material. Subcutaneous incision was closed by simple continuous suture

pattern, using Polyglactin 910 no. 2/0. Skin incision was closed by simple interrupted suture pattern, using braided silk no. 1 (Fig. 6). Postoperatively the dog was treated with intramuscular injection of ceftriaxone @ 25 mg/kg body weight twice a day for 5 days and meloxicam @ 0.1 mg/kg body weight once a day for 3 days. Syrup multivitamin Multistar Pet was administered orally @ 3ml BID for 10 days. Sutures were removed on 12th postoperative day and the animal had an uneventful recovery.



Fig 1: Preoperative examination of hernial Swelling



Fig 2: Barium sulphate contrast radiography of gastrointestinal tract.



Fig 3: Elliptical incision on hernial sac during surgical intervention



Fig. 4: Exposure of hernial contents (intestine) during surgical intervention

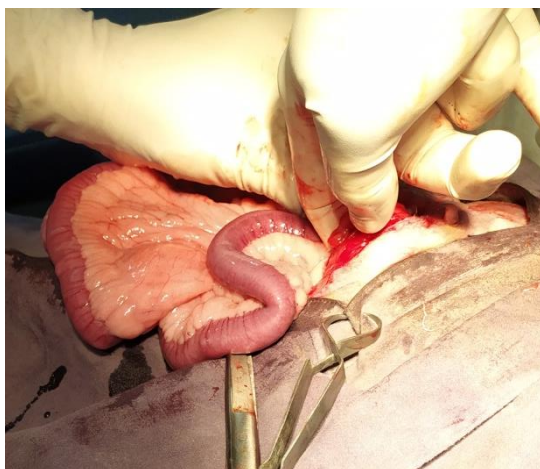


Fig 5: Reposition of hernial contents (intestine) in abdomen during surgical intervention



Fig 6: Interrupted suture on skin after completion of surgical intervention

Acquired inguinal hernias are relatively common in dogs and most often involve middle-aged intact bitches. Factors

potentially involved in inguinal hernia formation include anatomical changes, hormonal influences and metabolic

disorders. As inguinal hernias typically appear during estrus or in pregnant bitches, estrogen is believed to play a major role in the development of these types of hernias in dogs ^[1, 5]. Inguinal hernia may also be caused by trauma. Traumatic inguinal hernia may occur as a result of congenital weakness of the musculature or abnormality of the inguinal ring ^[2]. History, physical examination and ultrasonography are useful tools for the diagnosis of the inguinal hernia ^[6, 7]. Radiography can also be employed to confirm the condition in advanced stages of pregnancy ^[8, 9]. The surgical correction of this condition involves pre-operative, operative and post-operative considerations. Preoperative diet restrictions, stabilisation of the animal, antibiotic and analgesic therapy are very important ^[6]. Early presentation of the case, proper diagnosis and timely surgical intervention can improve the prognosis as in the present case; no complication was observed and recovered uneventfully.

Conclusion

The present case report documents the successful surgical management of inguinal hernia in a Pomeranian bitch.

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