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Case Report

A Rare Case of Lipoma of Vagina along with Perineal Hernia in a Female Dog and Surgical Treatment

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Abstract A 10 year old female dog was presented with history of difficulty in defecation, perineal swelling and swollen mass in the vaginal region. Physical examination showed characteristic signs of hernia on right side of the perineum. Under general anaesthesia surgery was performed and entire growth on the vaginal wall was excised completely. Another incision over the perineal swelling revealed pelvic fat herniation. After reducing the contents, herniorrhaphy was performed by suturing the pelvic diaphragm muscles and skin sutures were applied. Histopathologically, vaginal mass contained numerous polyhydral cells and each cell contains fat globule and nucleus pushed to mature fat cells. These findings confirmed as a case of lipoma. This is a record of successful management of an uncommon case of perineal hernia along with lipoma in a female dog.
Keywords *Female dog; Herniorraphy; Lipoma; Perineal hernia*

1. Introduction

Perineal hernia occurs when there is a breach in continuity of pelvic diaphragm. Pelvic and abdominal contents may protrude between pelvic diaphragm and the rectum. The cause of the muscular deterioration of the pelvic diaphragm may be due to various pathological processes like muscular atrophy, myopathies, hormonal imbalance and prostatic hypertrophy. The swelling is presenting ventrolateral to the anal opening and may be unilateral or bilateral. Generally male dogs are more prone to perineal hernia than the females because female dogs have broader, thicker and stronger levator ani muscle and strong fascial attachments to anal sphincter and rectal wall (Desai, 1982). Perineal hernia in a female dog has been described sporadically in literature (Pettit, 1962; Rochat and Mann, 1998; Niles and Williams, 1990). Perineal hernias in female dogs are often related to trauma (Hedlund, 1994). The following case report describes the clinical presentation and successful management of perineal hernia along with lipoma in a female dog.

2. Case History and Observations

A 10 year old female dog was presented to the College Hospital with history of difficulty in defecation, perineal swelling and swollen mass in the vaginal region (Figure 1). On palpation, vaginal mass was soft in consistency. Routine clinical and radiological examination was carried out for diagnosis. Per rectal examination of pelvic diaphragm reveals weakness of muscles. Clinical and radiographic

examination revealed no disorder related to rectum (Figure 2). Physical examination showed characteristic signs of hernia on right side of the perineum. Hence, it was decided to excise tumor mass and also perform perineal herniorraphy for correction of damaged muscles of pelvic diaphragm.

Figure 1: *Female dog with perineal swelling and swollen mass in the vaginal region*

Figure 2: *Radiographic examination revealed no disorder related to rectum*

3. Treatment and Discussion

The dog was prepared for aseptic surgery under Atropine sulphate premedication 0.04 mg/kg body weight given subcutaneously. Then anaesthsia was induced with xylazine hydrochloride intramuscularly 1 mg/kg and maintained with propofol intravenously 6 mg/kg. Animal was restrained

in sternal recumbency (Figure 3). An incision was made over the growth in vagina and entire growth was excised completely. The haemostasis was achieved by ligation (Figure 4). On gross examination the tumour was soft. The cut surface of the tumour was oily and yellowish in colour. After excision of tumor, hernia repair was done by making 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 and exploration of area confirmed the diagnosis of perineal hernia, revealing evidence of perineal fat within the herniated mass (Figure 5) and severe atrophy of both coccygeus and levator ani muscle. Then conventional herniorhappy was done by suturing of damaged pelvic diaphragm muscles with PGA No 1 (Figure 6) and skin sutures with Prolene (Figure 7). Postoperatively, ceftriaxone (Intacef, Intas) 20 mg/kg for 5 days and analgesic meloxicam (Melonex, Intas) 0.5 mg/kg for 5 days and alternate day dressing was done. Sutures removed on 10th day postoperatively and animal showed uneventful recovery. Histopathogically vaginal mass showed numerous polyhydral cells and each cell contain fat globule and nucleus pushed to mature fat cells. No mitotic figures were observed. These findings confirmed as a case of lipoma (Figure 8).

Figure 3: *Animal restrained in sternal recumbency*

Figure 4: *Haemostasis through ligation*

Figure 5: *Perineal fat within the herniated mass*

Figure 6: *Conventional herniorrhaphy*

Figure 7: *Animal after surgical repair*

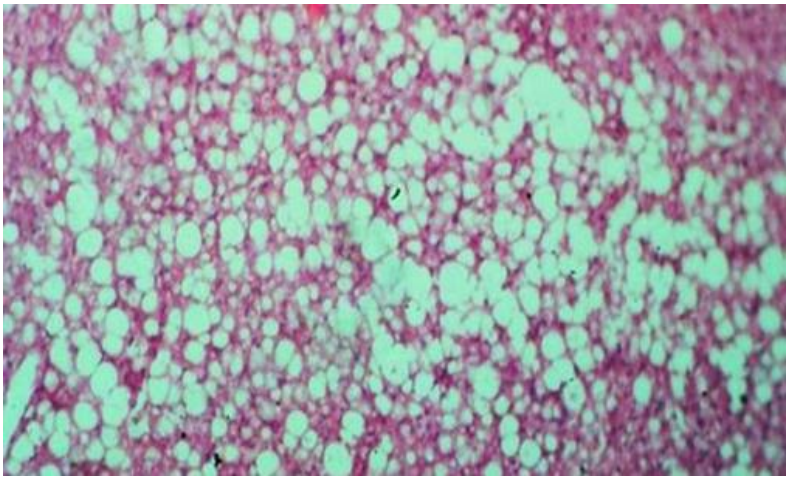

Figure 8: *Histopathogically, the mass showed numerous polyhydral cells and each cell contain fat globule and nucleus pushed to mature fat cells.*

Perineal hernia results from failure of the muscular pelvic diaphragm to support the rectal wall, which stretches and deviates. Pelvic diaphragm is the vertical closure of pelvic canal and it is composed of levator ani muscle medially and coccygeus muscle laterally, and confluence of these structures with external anal spinchter muscle completes the diaphragm. Generally herniation occurs between sacrotuberous ligament and coccygeus muscle in sciatic perineal hernias, ventral to ischiourethralis muscle, between the bulbocavernous and ischicavernosus muscle in ventral perineal hernias, between coccygeus and levtor ani muscle in dorsal perineal hernias and between levator ani, external anal spinchter and internal obturator muscle in caudal perineal hernia (Dorn et al., 1982). Dogs with increased risk of developing perineal hernia are Boston terrier, Collie, Pekingese, Welsch Corgi and Mongrel. Mostly constipation and hormonal imbalance predisposes these animals for occurrence of perineal hernia. The advanced age of the patient and the concurrent inguinal hernias suggest that diminished vitality of the tissues which was an important etiological factor for perineal hernia in a female crossbred terrier (Pettit, 1962). Besalti et al. (2004) reported rectal lipoma as a possible cause perineal hernia in a male dog. But our report showed a rare incidence of vaginal lipoma could be a possible cause of perineal hernia on a bitch. There are many different techniques of perineal hernia repair, of which the two most widely accepted are anatomical reduction technique which was performed in this case and internal obturator trauma. Closure of the hernia defect by transposition of the superficial gluteal muscle (Spreull and 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 the present case conventional herniorraphy along with excision of vaginal lipoma was performed and animal started normal defecation after 3 days and no recurrence of hernia was reported over a period of 6 months postoperatively.

4. Conclusion

It was concluded that the case report was rare and also the conventional technique can be used successfully for surgical management of clinical cases of perineal hernia in female canine cases.

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