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Ruptured inguinal mammary tumor exposing herniated uterus (inguinal HYSTEROCELE) in a spitz bitch and its successful surgical management

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Abstract

A 6 years old Spitz bitch was presented to Veterinary clinical complex, with a history of ruptured left inguinal mammary gland. Physical examination revealed ruptured left inguinal mammary gland exposing herniated uterus (inguinal hysterocele). The herniated uterus along with ovaries was removed through ovariohysterectomy procedure and the ruptured mammary gland was excised under general anaesthesia. The bitch recovered completely by 10th postoperative day without any complications.

Keywords: Inguinal mammary tumor, inguinal hysterocele, spitz bitch

Introduction

Mammary tumors are common in bitches over three years of age and the incidence is highest in the bitches aged between 9-11 years. They represent 25% of all canine tumors and 50% of all tumors in the bitch [7]. Inguinal hernias seen less frequently than umbilical hernias and result from a defect in the inguinal ring through which abdominal contents protrude in dogs. Congenital inguinal hernias are rare in dogs and may be associated with other abnormalities such as umbilical hernia, and perineal hernia [2, 7]. Acquired Inguinal hernias are relatively common in dogs and most often involve middle aged intact bitches. Most inguinal hernias appear during estrus or in pregnant bitches [7]. This paper presents a case of ruptured mammary tumor exposing the herniated uterus in a Spitz bitch and its successful surgical management.

Case history & observations

6 years old Spitz bitch was presented to the Veterinary clinical complex, with a history of ruptured left inguinal mammary tumor. The bitch had slightly elevated temperature, respiration and pulse. The blood picture and biochemical parameters are within the normal range. Clinical examination of the bitch revealed ruptured left inguinal mammary tumor exposing herniated uterus (inguinal hysterocele). Based on the history and clinical examination it was diagnosed as a ruptured inguinal mammary tumor exposing inguinal hysterocele.

Treatment and discussion

The bitch was placed on dorsal recumbency and the left inguinal mammary site was aseptically prepared for the surgery and the exposed herniated uterus was cleaned with normal saline (Fig.1). General anaesthesia was induced with ketamine @ 10mg per kg body weight intramuscularly and xylazine @ 1mg per kg body weight intramuscularly after premedication with atropine sulphate @ 0.02mg per kg body weight intramuscularly and maintained the anaesthesia with propofol @ 4mg per kg body weight intravenously in incremental doses till the completion of the surgery. The exposed herniated uterus along with ovaries was removed through ovariohysterectomy procedure and the uterine stump was repositioned in to the abdominal cavity. The inguinal ring was closed to prevent herniation of the other contents of the abdominal cavity by applying simple interrupted sutures with no.1, polydioxanone. An elliptical skin incision was made around the affected inguinal mammary gland and by blunt dissection the tumor mass was freed and separated from the abdominal wall and removed. The bleeding vessels were carefully ligated and applied Subcuticular suture with No.0, polyglactin 910 (vicryl) suture and the skin incision was closed using horizontal mattress sutures with synthetic polyamide (Fig.2) [1, 2]. The bitch was given Inj. ceftriaxone Na @ 25mg intramuscularly for 7 days, Inj. meloxicam @ 0.2 mg/kg body weight intramuscularly for 2

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days postoperatively and daily dressing was done for 5 days and then on alternate days postoperatively till the incision healed. The sutures were removed on 10th day postoperatively. The bitch recovered uneventfully.



Fig 1: Ruptured mammary tumor exposing the herniated uterus



Fig 2: Removal of uterus through Hysterectomy procedure and mammary tumor excision

The bitch was suffering from inguinal hysterocele and inguinal mammary tumor^[4]. The ruptured mammary tumor was hard and granular in appearance. The tumor may be cystic in nature and ruptured as a result of self trauma. The caudal abdominal and inguinal mammary glands are significantly more at risk, and 65% of all mammary tumors develop in these two glands^[7]. Between 40% to 60% of malignant mammary tumors are having estrogen and progesterone receptors and certainly show marked estrus related growth. Surgical excision remains the primary treatment of mammary neoplasia in bitches^[6]. The histopathology report confirmed the mammary tumor as metaplastic carcinoma.

The herniated uterus was soft and edematous in consistency. the uterus was herniated up to the level of cervix and the blood supply to the ovarian bursa was compromised. The ovarian bursa showed necrotic changes (ischemic necrosis). The ovaries of herniated uterus were atrophied due to lack of proper blood supply. The hernial ring (inguinal ring) was also small (Fig.2). This might be the reason for decreased blood supply to the ovarian bursa and ovaries. Many conditions may predispose the bitches for inguinal herniation of uterus. The inguinal canal is anatomically open in carnivores^[4] and is shorter and larger in diameter in female dogs than males^[3]. Estrogen production is considered to have a close relationship to development of inguinal hernia^[6]. Repair of the inguinal ring is the choice of treatment in inguinal hernia^[7] to prevent further herniation of the abdominal contents.

There were no symptoms other than the symptoms related to inguinal mammary tumor. Inguinal hysterocele is chronic in nature and usually has no clinical symptoms until pregnancy or development of pyometra^[5]. Incarcerated hernias are of a diagnostic challenge because palpation may not yield diagnosis^[7]. The symptoms of herniated uterus might be masked by the increase in size of the mammary gland due to neoplasia. The rupture of inguinal mammary tumor exposed the herniated uterus in due course. The rupture of mammary gland might be the result of self mutilation by the bitch.

Conclusion

The inguinal hysterocele, which was exposed by the rupture of mammary tumor was a rare finding among dogs and was managed successfully.

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