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Surgical management of inguinal hysterocele in a female spitz dog

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Abstract

A 3 year old Indian spitz female dog was presented with the history of whelping two stillborn puppies 24 hours back and swelling at the inguinal region along with blackish discharges and continuous straining for one day. Clinical, radiographic and ultrasound examination revealed the presence of the dead foetus in the inguinal region. The condition was diagnosed as inguinal hysterocele and celiotomy was performed on emergency basis. The herniated gravid uterus was reduced into the abdomen and the dead foetus was removed through hysterotomy. After suturing the uterine incision herniorrhaphy was performed and celiotomy incision was closed in routine manner. Post-operatively antibiotics and anti-inflammatory drugs were administered and the dog had an uneventful recovery.

Keywords: Gravid uterus, inguinal hysterocele, herniorrhaphy, celiotomy

Introduction

Hysterocele is one of the congenital abnormalities of the inguinal ring characterized by protrusion of the uterus through the inguinal canal. It is commonly observed in toy breeds of dogs (Sainulabeen *et al.*, 2016) [4]. Inguinal hernias may be bilateral or unilateral and consists uterus, ovary, bladder, fat, omentum. (Byers *et al.*, 2007; Kalitha *et al.*, 2012; Simon *et al.*, 2013) [1, 2, 6]. Inguinal hernias should be differentially diagnosed from mammary neoplasms and abscess. If inguinal hernia is associated with pregnancy, it predisposes the dystocia. Surgical correction can be adopted to relieve the dystocia and suture the hernial ring after replacing the uterus in normal position.

Case History and Observations

A 3 year old Indian spitz female dog was presented to the Teaching Veterinary Clinical Complex (TVCC), College of veterinary science, Korutla with the history of dystocia. The bitch was whelped two dead fetuses 24 hours back and showing abdominal swelling at the inguinal region (Figure 1). Clinical examination reveals normal body temperature 101.5°F, pulse rate 88/min and pale conjunctival mucous membrane. The capillary refill time was >3/min and respiratory rate was 21/min. The dog was straining since one day and brownish black vaginal discharges with foul smell noticed during per vaginal examination. Lateral abdominal radiograph (Figure 2) and ultrasound examination reveals the presence of dead foetal skeleton in the inguinal region. Based on the clinical, radiographic and ultrasound examination the condition was diagnosed as inguinal hysterocele and it was decided to relieve the dystocia and replace the uterus in normal position by surgical intervention.

Treatment - surgical management

The female dog was placed in dorsal recumbency and the mid-ventral abdomen (surgical site) was prepared for surgery. Dog was premedicated with atropine sulphate @0.04 mg/kg and xylazine @ 1 mg/kg body weight I/M and anaesthesia was induced with ketamine @ 10 mg/kg body weight I/M and maintained with propofol @ 2 mg/kg body weight I/V. A linear skin incision was made in mid-ventral abdomen and celiotomy was performed and the abdominal contents were explored. The herniated gravid uterus was reduced after exposing and enlarging the inguinal ring. After reducing the gravid uterus back into the abdominal cavity, hysterotomy was performed to remove the putrefied dead foetus and the uterine incision was closed with an inverting suture pattern (Cushing plus Lembert) using 2-0 Polydioxanone. The herniorrhaphy was performed with simple interrupted suture pattern using synthetic non absorbable suture material (prolene).

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The abdomen was flushed with warm normal saline mixed with metronidazole to prevent the chances of contamination. The celiotomy incision was closed in three layers (linea alba by simple interrupted followed by subcutaneous tissue-simple continuous and skin-simple interrupted) (Figure 3). Post operatively, the dog was treated with inj. ceftriaxone sodium @ 25 mg/kg body weight and meloxicam @ 0.2 mg/kg body weight I/M for 7 days and routine dressing of the surgical site with povidone iodine was done until the 10th post-operative day on which cutaneous sutures were removed and uneventful recovery of the dog was observed.

Discussion

Dystocia due to inguinal hysterocele is rare condition in canines, it is predisposed by increased abdominal pressure during pregnancy and congenital anatomical variations in vaginal process and nutritional causes. Differential diagnosis of inguinal hernia with mammary tumours, abscess is very important to identify the condition. Radiography and ultrasound examination are the best diagnostic methods used to identify the hysterocele (Noakes *et al.*, 2001; Serin *et al.*, 2009; Simon *et al.*, 2013) [3, 5, 6]. Pre operative, operative and post operative considerations are important in surgical correction of Inguinal hernias (Slatter, 1993) [7]. Recovery of the patient depends on accurate timely diagnosis and necessary surgical interventions.



Fig 1: Pre-operative photograph showing abdominal swelling at the inguinal region



Fig 2: Lateral abdominal radiograph showing fetal skeleton in the herniated mass



Fig 3: Photograph showing skin sutures applied at the end of surgery

Conclusion

In canines inguinal hysterocele is one of the congenital abnormality, if it is predisposed by pregnancy leads to dystocia. Accurate diagnosis and emergency surgical interventions needed to relieve the dystocia.

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