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Surgical management of cystocele in a kitten: A rare case report

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Abstract

A 3 months old domestic short hair female kitten was presented with the history of swelling in the right inguinal region for 1 week after the trauma. Clinical examination revealed soft swelling and mild pain on palpation of the swelling. Ultrasonography was performed and revealed presence of anechoic structures at the swelling and confirmed the swelling as cystocele on fine needle aspiration. A traumatic unilateral inguinal herniation of the urinary bladder and its surgical management is described in the presented case.

Keywords: cystocele, inguinal, hernia, kitten

Introduction

Hernia is the abnormal protrusion of a part of an organ, or organs from their normal anatomical location through an abnormal defect or anatomical hole (Read and Bellenger, 2003) [1]. Inguinal hernias could be congenital or acquired in cats. Congenital inguinal hernias in cats have an incidence of 0.02–0.025% with no breed or gender predilection (Zulauf *et al.*, 2007) [4]. Acquired inguinal hernia occurs by blunt trauma (Rizk and Samy, 2016) [2].

Case history and diagnosis

A 3 months old domestic short hair female kitten was presented with the history of swelling in the right inguinal region for 1 week after a trauma. Clinical examination revealed soft swelling in the right inguinal region and had mild pain on palpation of the swelling. Ultrasonography was performed and revealed presence of anechoic structures at the swelling and confirmed as cystocele on fine needle aspiration.

Treatment

Preoperative haematology values were within the normal range. Animal was pre-medicated and induced with a cocktail of inj. xylazine @ 1 mg/kg body weight, inj. ketamine @ 10 mg/kg body weight IM. Pre-operative ceftriaxone was given @ 20 mg/kg body weight IM and Inj tramadol @ 2 mg/kg body weight IM was given postoperatively.

A skin incision was made over the swelling. The herniated urinary bladder was exposed through the right inguinal canal. The urinary bladder was partially emptied by cystocentesis and the urinary bladder was repositioned into the abdomen. Right external inguinal ring was closed with Polyamide 2-0 in a simple interrupted pattern. Skin was closed with silk 2-0 in a simple interrupted pattern.

Post-operatively, ceftriaxone @ 20 mg/kg bodyweight and meloxicam @ 0.2 mg/kg body weight and pantoprazole @ 1 mg/kg body weight was given orally for 3 days. Kitten appeared normal during postoperative period without any evidence of anorexia, stranguria or haematuria. The kitten had an uneventful recovery.

Discussion

Zulauf *et al.*, (2007) [4] and Vega *et al.*, (2018) [3] described herniation of the urinary bladder through a congenitally enlarged inguinal canal in a male cat and female cat respectively. Rizk and Samy (2016) [2] described a case report of herniation of urinary bladder through the abdominal wall defect resulted from trauma in a 5 months old male cat. Only little information on inguinal hernias in cats is found in the literature.

Inguinal canal is the opening in the abdominal wall extends from the internal to external inguinal rings. The inguinal ring is bounded cranially by the caudal edge of the internal abdominal oblique muscle, medially by the rectus abdominis muscle and laterally by the

inguinal ligament. Inguinal canal in normal cats is measured as 5 mm in diameter (Zulauf *et al.*, 2007) [4]. Inguinal hernia occurs as a result of defect in the inguinal ring through which the abdominal contents could protrude. Uncomplicated unilateral inguinal hernias can be approached over the inguinal rings whereas complicated cases such as strangulation or concurrent abdominal trauma are approached through ventral midline laparotomy for exploration (Vega *et al.*, 2018) [3].

In the presented case, direct unilateral uncomplicated inguinal hernia was approached through inguinal ring, herniated urinary bladder was emptied and repositioned into abdominal cavity and herniorrhaphy was performed. The etiology for the inguinal hernia in this kitten was trauma. Animal made an uneventful recovery and returned to its normal activity post-operatively without any complications.

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Fig 1: Intra-operative cystocentesis



Fig 2: Closure of right inguinal ring with polyamide 2-0 simple interrupted pattern

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