

Surgical Management of Unusual size of Cystic Calculi in a Bitch: A Case Report

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Abstract

A case of unusual size of cystic calculi has been reported in five year old Pomeranian female dog and its successful management through surgical intervention.

Keywords: cystic calculi, cystotomy, bitch

Urolithiasis is the formation of calculi from less soluble crystalloids of urine as a result of acquired physiological and pathological changes (Jattennavar and Kalmath, 2012). The urinary obstruction is more common in 5-7 years of age group. But bitches are also prone for occurrence of few types of Uroliths (Linda et al., 2011). The present report describes the surgical management of cystic calculi in a middle aged bitch.

History and clinical observations

A 5 year old, Pomeranian female dog was presented to the College Hospital with the complaint

of haematuria and dribbling of urine since one month. On physical examination, the bitch was dehydrated, tense abdomen attributed to pain and distended urinary bladder. Clinical examination revealed slightly elevated rectal temperature (103.8 °F), heart rate and respiration rate. Radiography of lateral pelvis revealed distended urinary bladder containing radiodense single big calculus (Fig.1). It was decided to perform cystotomy.

Treatment and Discussion

As the condition of animal was poor, the animal was administered 150ml of Ringers Lactate & 150ml of 5% Dextrose intravenous route prior to surgical intervention. The ventral abdomen was prepared for surgery and animal was premedicated with Atropin Sulphate @ 0.04mg/kg body wt. and followed by Xylazine Hydrochloride @ 1mg/kg body wt. Intra muscularly. Ketamine hydrochloride was given @ 5mg/kg body wt. Intravenously to induce

general anaesthesia. Animal was controlled in dorsal recumbency. The bladder was approached through caudal paramedian incision just 2 inches posterior to umbilicus. Urinary bladder was exteriorized, Sterile, saline- moistened gauze squares were packed around the bladder to prevent urine spillage into the abdominal cavity. A 20 gauge needle attached to a 20ml syringe was inserted through the bladder wall to facilitate drainage of the bladder prior to incising it. Two stay sutures were placed in cranial and caudal positions through the serosal and sub-mucosal muscular layers of ventral bladder wall and an incision was given on the ventral bladder wall. The exposed mucosa appeared slightly thickened and hyperemic. A large 5 cm hard single calculus was removed (Fig. 2). The cystotomy incision was closed by continuous 2 layers of lambert sutures using chromic catgut no.3/0 and abdominal incision was closed with No.1/0 catgut and Skin was sutured in routine manner. Post-operatively, the animal was given ceftriaxone @ 20mg/kg body weight intravenously daily for five days, meloxicam @ 0.2

mg/kg body weight intramuscularly for 3 days and oral Cystone tablets for one month. Antiseptic dressing of surgical wound was done by povidone iodine daily for 10 days till removal of skin sutures. The removed big calculi was irregular oval in shape and slight brown in color. By estimating the mineral content of the stone was predicted as cystine (Malik Abu Rafee et al., 2014). The prevalence of Cystine uroliths is common in dogs and disorder has some congenital link (Chakraborty, 2007). In the present case the reason is not known. Medical management is possible but in present case the surgical intervention was decided due to big size of calculi. Animal was maintained with low protein diet, ad libido drinking water and minimal salt intake resulted in uneventful recovery and no recurrence of urinary calculi was reported in the follow up period of 2 years.

Summary

A case of surgical management of unusual size of cystic calculi in a bitch has been reported and discussed.

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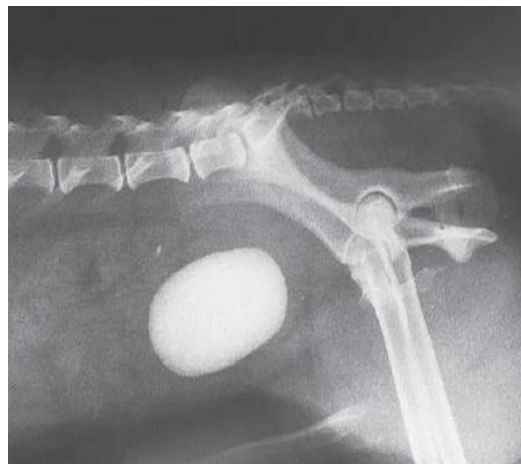


Fig. 1 Lateral abdominal radiodense cystolith



Fig.2 Removed cystoliths