

Spontaneous repelling of a large urocalculi in a Working She-donkey

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Abstract: Urolithiasis due to calcium oxalate calculi is relatively uncommon, with calcium carbonate calculi tending to develop more commonly in animals grazing on oxalate containing plants. When a calculus occurs in the bladder. It can usually be removed through the urethra via several surgical procedures. In this case, unusual spontaneous repelling of a large urocalculi in a Working She-donkey was recorded.

Keywords: urinary bladder, stone, She-donkey

INTRODUCTION

Several surgical procedures have been described for urocalculi removal. The surgical options include midline or paramedian laparotomy and cystotomy, pararectal cystotomy, subischial urethrostomy, urethral sphincterotomy, and laser or shock wave lithotripsy. The selection of a procedure is dictated by the size, location, and number of urocalculi; the sex and physiologic status of the horse; and the availability of surgical facilities[5]. When a calculus occurs in the bladder of the mare it can usually be removed through the urethra[2]. Urolithiasis due to calcium oxalate calculi is relatively uncommon, with calcium carbonate calculi tending to develop more commonly in animals grazing on oxalate containing plants[1].

CASE HISTORY

A 10-year-old She-donkey with intermittent colic, Continual dribbling of urine from the vulva and haematuria was presented during a farm visit. The animal used as a burden beast. Based on the owner's data, Haematuria is most evident after the animal being overloads and toward the end of a voided urine stream. The animal occasionally stretches out to urinate and exhibit an altered hind limb gait. No previous treatment was done. In a one occasion an episode of colic attacks the patient during her overloading. Then, the animal suddenly assuming abnormal posture and a large calculus was expelled from the vulva. A urine sample was taken for urinalysis and the owner has been informed about the recurrence of the case. The calculus was taken for analysis of their elements by Energy Dispersive X ray Fluorescence (EDXRF) apparatus (Joel – Japan).

Description and chemical composition of the calculus:

The calculus is rounded, yellowish brown and had a uniformly granular and spiculated surface (fig.1). The calculus weighed 76.82 gm and a diameter of approximately 4.75 cm with a circumference ranged from 14.5 to 15.5 cm and estimated volume 40 cc. The specific gravity of the calculus was calculated 1.925 g/L. the calculus was 100% calcium oxalate crystals (CaC₂O₄).



Fig-1: Round shape calcium oxalate calculus weighed 76.82 gm

DISCUSSION

Urolithiasis is seen more frequently in males than females, which has been attributed to anatomic differences between the male and female urethra. Short dilated urethra in female, vesicle location of the calculus, the nature of the calculus, as well as the type of animal work in carrying heavy loads on her back. All these features act together in the spontaneous expelling of the calculus. The results of urinalysis strongly

support the chemical structure of the calculus as the calcium oxalate was found to be the main salts. Although, calcium oxalate stones are much less frequent in animals. Sporadic cases have been documented in hamsters, rabbits, deer and sheep[4]. In this respect, this is the first record in she-donkeys. The use of large quantities of plant foods in the diet of carnivores may cause an excessive ingestion of oxalates with consequent hyperoxaluria[3]. The affected she-donkey is mainly kept on plant foods all over her life which may suggest the finding of calcium oxalate stone formation[4]. Previous reports showed that, equine uroliths have a diameter of 0.5–21 cm, weigh as much as 6.5 kg, and are found most often within the bladder[2,5]. Some cases are removed manually; others surgically through urethral sphincterotomy. In this case, the relative size, diameter and weight of such calculus may be expelled spontaneously without surgical interference.

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