INTRODUCTION

Urolithiasis is defined as the formation of urolith anywhere in the urinary system. The disease is reported worldwide and occurs in all species of the animals but has most frequently been recorded in feeder steer and lambs (Radostitis et al., 2000). In India, urolithiasis has mostly been reported in bullocks, goat, sheep and buffaloes from different corners of the country (Tyagi and Singh, 1993). Sporadic cases of urolithiasis have also been reported in buffalo and cow calves. Predisposing factors like age, types of feed and water, season, castration, etc. have been identified as playing important roles in pathogenesis of disease. Among bovines, buffalo calves had a significantly higher occurrence of obstructive urolithiasis than cow calves and buffaloes. The present paper describes a case of obstructive urolithiasis with cystorrhexsis in a buffalo calf and its surgical management.

Keywords: urolithiasis, buffalo calf, urinary system

CASE HISTORY AND OBSERVATIONS

A 7-month-old buffalo calf presented at the Department of Veterinary Surgery and Radiology, College of Veterinary Science, Tirupati, with a history of not having passed urine for the previous 15 days and being treated by a local veterinarian. There was complete cessation of urination, abdominal distension and unusual posture. The other clinical signs were kicking, posture to urinate, pumping motion of the tail. Ultrasonographic examination of urinary bladder revealed presence of hypoechoic fluid in the abdomen with intestinal loops (Figure 1) and also the presence of hyperechoic calculi floating in the fluid (Figure 2). Based on the history, clinical symptoms and ultrasonogram, the case was diagnosed as a case of cystic calculi.

TREATMENT AND DISCUSSION

The animal was prepared for aseptic surgery under local infiltration with 2% lignocaine. Laparotomy was done through left para median incision. Urine present in the abdomen was siphoned out as much as possible without any damage to the any other abdominal organs. The urinary bladder was identified and the tear in the urinary bladder was located (Figure 3). Then the urinary bladder was incised, and sandy, white colored calculi were removed. There was thickening of wall of the urinary bladder with severe congestion indicative of a chronic case of cystic calculi (Figure 4). The urinary bladder was flushed with normal saline. Normograde catherization of urethra was done to

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Figure 1. Anechoic fluid in the abdomen with intestinal loops.

Figure 2. Presence of hyperechoic calculi floating in the abdominal fluid.
Figure 3. Photograph showing thickened urinary bladder wall with leakage of urine.

Figure 4. Photograph showing sand like cystic calculi with congested wall and petechial haemorrhage.
ensure the patency.

The urinary bladder was sutured with a double layer of inversion sutures using 3/0 chromic catgut. The laparotomy wound was closed with simple interrupted pattern using No.1 chromic catgut and the skin incision was apposed with horizontal mattress suture pattern using No. 1 silk. Post-operatively animal was given fluid therapy and antibiotic and anti inflammatory treatment for 5 days. Animal recovered uneventfully on the 10th post operative day.

Clinical signs associated with urolithiasis depend upon the severity of blockage and the reaction of surrounding tissue (Van Saun, 1997). Complete blockage results in various stages of stranguria, exaggerated and prolonged urination posture, urine dribbling and hematuria. Affected animals may be depressed and lethargic, grind their teeth, and show abdominal distention and signs of pain (Van Saun, 1977). Rupture of the urinary bladder is the most common sequel to obstructive urolithiasis especially in buffalo calves. While a discrete dorsal tear may sometimes heal spontaneously, ventral tear requires surgical intervention (Tyagi and Singh, 1993).

REFERENCES

