



Treatment of obstructive urolithiasis by tube cystotomy in goats a report of 4 cases

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Abstract

This case report investigates four instances of obstructive urolithiasis in male goats presented to the Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, A.N.D.U.A.T. Kumarganj Ayodhya. The affected goats, presenting with anorexia, abdominal pain, and distension, exhibited bilateral abdominal distention, tachypnea, dribbling of urine and urine retention (3-5days). Tube cystotomy was done, para-median laparotomy on the side of midpoint between scrotum and distal end of prepuce. In one case cystorrhaphy was performed. In all cases Foleys catheter was put, bladder evacuated and then lavaged with sterile isotonic saline solution and incision closed. Medicinal treatment included antibiotics, anti-inflammatory drugs, cystone tablet, NH₄Cl (Nausadar). Catheter removed once steady stream of urine obtained through urethra. In all animals' uneventful recovery was observed in 8-10 days, all other symptoms subsided and in the follow up there was no reoccurrence of the calculi for 3 months.

Keywords: obstructive, urolithiasis, cystotomy, goat.

Introduction

Urolithiasis is a common disease of ruminants caused by formation of calculi in the urinary tract with subsequent blockage to urine outflow consequently leading to uremia and death. It has been attributed to be the fifth most prevalent cause of death in feedlots (Singh et al., 1981). India has documented cases of urolithiasis primarily in bullocks, goats, sheep, and buffaloes from various regions of the country (Tyagi and Singh, 1993). Urinary obstruction appears to affect both sexes equally, however, it is an important problem associated mainly with males because of the anatomical conformation of their urinary tract (Larson, 1996; Radostits et al., 2000). The pathophysiology of urolithiasis is multi-factorial with various environmental, nutritional, and hormonal factors. Although medical treatment has been described as successful in alleviating the problem during early stages of the disease, once the urethral obstruction is complete, surgical intervention is warranted. Failure to relieve the urethral obstruction can lead to distention and then, rupture of the urethra or bladder. Depending on the animal's worth and intended purpose, the obstruction's location, and the bladder and urethra's integrity, the best surgical treatment may be chosen. Both urethrostomy and urethrotomy have been associated with stricture formation and subsequent recurrence of the urethral obstruction, leading to a poor long-term prognosis for small ruminants.

Clinical sign and observations

Four cases of obstructive urolithiasis were presented to the Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, A.N.D.U.A.T. Kumarganj Ayodhya, with the complaint of anorexia, abdominal pain and distension, and absence of micturition. All four were males (1 Sirohi and 3 Nondescript breed) anamnesis revealed that 3 of them were not voiding urine since 3 days and one was not since 5 days and anorexia was observed in all of them since 2-6 days. Clinical signs revealed bilateral abdominal distention, tachypnea, dribbling of urine, arching of back and retention of urine 3 were restless and one was comparatively relaxed.

Treatment

All animals were put under fluid therapy and preoperative antibiotics were given(ceftriaxone)Animals were positioned in dorsal recumbency and L block and Line block was done using 2% lignocaine was done and then para-median laparotomy was performed few centimeters on the side of midpoint between scrotum and distal end of prepuce. In 3 cases bladder was intact and cystotomy was performed and foleys catheter was placed through a stab incision and stay sutures put. In one case bladder was ruptured, in this case first cystorrhaphy was done then foleys catheter was placed through a stab incision and stay sutures were put on the ventral aspect. The catheter was tunneled subcutaneously a short distance before entering the abdominal cavity. Then bladder was evacuated and lavaged with sterile isotonic saline solution and the incision is closed and catheter is sutured through the skin.



Fig 1 :-Foleys catheter placed through a stab incision into the bladder



Fig 2:-Catheter left open for 3-4 days to allow urine evacuation



Fig 3:-Ruptured Urinary bladder

Postoperative Management

Catheters were left open for 3 to 4 days after surgery to allow evacuation of urine, avoid straining, and decrease urethral inflammation and provide rest. After 3-4 days catheters were blocked occasionally to determine if the urethra was patent or if the obstruction persisted. If the animal showed signs of discomfort by vocalization or posturing and straining to urinate unsuccessfully, the catheter was again opened. This process was continued until the animal produced a steady stream of urine. If urination remained normal after occlusion for 24 hours or more, the catheter was removed after deflating the balloon. Antibiotics (Ceftriaxone tazobactam) and anti-inflammatory drug (Meloxicam) were administered throughout the duration and drugs were discontinued 3 to 5 days after catheter removal, cystone tablets and urine acidifier NH_4Cl (Nausadar) was administered with an advice for regular antiseptic dressing of the site with Lorexane ointment and Cipladine lotion..

Result

There was uneventful recovery in all the four cases in a period ranging from 8-10 days, the animals started eating normally in that duration. There was no recurrence of the calculi in a follow up period of 3 months and therefore it is concluded that tube cystotomy was successfully done

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