



# Cystorrhexis due to obstructive Urolithiasis in a Bull calf -a case report

T.V. Jayamohan

**O** bstructive urolithiasis in bovine is primarily a problem of castrated adult males (Singh and Singh, 1990). Rupture of urinary bladder was reported in 37.5 per cent of urinary obstruction cases in cattle (Prasad *et al.*, 1978). Mortality rate following rupture of urinary bladder, despite treatment, has been reported to be as high as 50 per cent (Prasad *et al.*, 1979 and Donecker and Bellamy, 1982). Reports on complication of obstructive urolithiasis in very young calves are rare. A case of cystorrhexis due to urethral calculus in a 26 days old crossbred male calf and its successful surgical management is reported in this paper.

Dr. T.V. Jayamohan,  
MVSc  
Veterinary Surgeon,  
Veterinary Dispensary  
Chengalayi, Kannur

The calf was presented with the history of anuria and progressive abdominal distension since a week. The animal was weak, dehydrated and had staggering gait. Rectal temperature was 99.8°F and pulse and heart rates were 98 and 100 per minute respectively. Paracentesis abdominis revealed presence of urine in the abdominal cavity. The case was tentatively diagnosed as cystorrhexis and laparotomy was advised.

The calf was premedicated

with 0.2 mg per kg body weight of xylazine hydrochloride intramuscularly. Ketamine hydrochloride was administered intravenously at the rate of



3 mg/kg body weight to effect general anaesthesia. The entire right flank was prepared for aseptic surgery and laparotomy was performed through a 13 cm long incision commencing below the external angle of ilium. About 6 litres of urine was siphoned out from the peritoneal cavity. Two adjacent points of rupture were noticed at the neck of the bladder. Bladder wall was hyperaemic and had a circumscribed necrotic area at the level of vertex. Bladder lumen was inspected for calculi, tear or haemorrhage. Simultaneously, ischial urethrotomy was performed through a midline incision along the ischial arch and a polyethylene catheter with a sterile stilette was passed through the urethra into the bladder. An obstruction could be felt at the neck of the bladder and upon slight pressure and gentle manipulation a hard calculus of about one cm diameter got dislodged and could be removed from the bladder. The polyethylene catheter was fixed with the external skin by simple interrupted sutures using silk. The end of the tube within the bladder lumen was fenestrated. Cystorrhaphy was performed at the two points of rupture by double layer of inversion sutures in cushing pattern using No.1/0 catgut. Subtotal cystectomy was performed at the necrotic area at the level of vertex and the wound edges were apposed by double layer of inversion sutures in cushing pattern using No.1/0 catgut. As soon as the bladder wall was repaired, urine started dribbling through the polyethylene catheter. Peritoneal cavity was thoroughly washed with normal saline solution. Laparotomy wound was closed as per standard technique.

Post operatively a combination of ampicillin sodium (500 mg) and cloxacillin sodium (500 mg) were given intramuscularly for 5 consecutive days. Dextrose



saline (540 ml) was administered intravenously daily for three days along with 75 mg of Diclofenac sodium intramuscular for two days and the skin wound was dressed with Povidone Iodine ointment. Skin sutures were removed on the 10 postoperative day. The calf started normal feeding by the third day and recovery was uneventful. 100 ml of normal saline containing 250 mg of ampicillin sodium and 250 mg of cloxacillin sodium was used to flush the urethra daily through the indwelling catheter for 10 days. By the 12<sup>th</sup> day after surgery, urine started dribbling from the natural opening and the catheter was removed on the 10 day postoperatively. There was slight seepage of urine at the urethrotomy site but the wound healed completely in about 3 weeks.

In this case, the obstructing calculus was located at the neck of urinary bladder as reported by Singh *et al.* (1985). Complications following cystorhexis included adhesions with abdominal viscera, leakage of urine, atonic bladder, blood clot formation in urinary bladder, peritonitis and cystitis (Oehme and Tilman, 1965 and Sharma *et al.*, 1983). In the present case no major complication was observed except for a mild inflammatory swelling at the urethrotomy site.

#### References

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**a) Psoroptic mange.** The main effect is a pruritis caused by the biting and sucking activity of the mites, which results in the formation of vesicles, the exudates drying on the skin to form a crust. Cattle are extremely restless and it had been observed that the feed intake of the animals might drop by 20 per cent. The skin areas most often affected are the abdomen, tail head and prepuce. These locations suggest that one common mode of transmission is when cattle mount on each other

**b) Chorioptic mange** occurs most often in housed cattle affecting mainly the neck, tail head, udder and legs. It is a mild condition and lesions tend to remain localized with slow spread. The pruritis caused by the mites results in rubbing and scratching with damage to hide.

**c) Diagnosis** of mange infections is made by examination of skin scrapings for the presence of mites and/or their developmental stages. Deep scrapings may be taken especially when the mites are the burrowing type. Scrapings should be taken from the edges of the lesions for better results.

**Treatment-** Acaricides as external application or systemically are used in the treatment, the latter preferred when the infection is due to burrowing mites. Various organochlor compounds, organophosphate compounds, carbamates and synthetic pyrethroids are available for external application. The correct dilutions may be applied on the skin, or animals may be sprayed, dipped or dusted. Injection of ivermectin has been found very effective against various mange mites. Application of Karinji oil (Oil of Pongamia spp.) along with a single injection of ivermectin has been reported very effective in curing mange.



*Enormous jump in meat consumption will drive up demand for grains, according to recent reports from International Food Policy Research Institute. The report, 2020 Global Food Outlook- trends, alternatives and choices projects that child malnutrition will decline by only 20% over the next 20 years unless more aggressive measures are taken.*

