

RETENTION OF URINE DUE TO EVERSION OF URINARY BLADDER IN BUFFALOES

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SUMMARY

Five buffaloes were admitted with the history of eversion of urinary bladder. The buffalo were constantly straining to pass the urine but unable to pass. On admission to the Teaching Veterinary Clinical Service Complex, the everted bladder was visible. In two buffaloes the urinary bladder was intact and in three buffaloes the ruptured bladder was hanging out. The ruptured urinary bladder was repaired and pushed back to its original position. In buffaloes with intact bladder, the urine was taken out and after proper lubrication it was also put back to its original position. The buffaloes with intact urinary bladder started passing urine after its replacement without any complication. In ruptured urinary bladder, it became functional only in one case but in buffaloes whose ruptured urinary bladder was thin walled and hanging could not respond to the treatment. These buffaloes could not pass urine and died after one month of parturition.

Key words: Eversion, urinary bladder, retention of urine, buffaloes

Retention of urine is not so common in females as compared to males. In males, the most common causes of retention of urine are urethroliths and urithritis. and sometimes these conditions are difficult to treat. Prognosis is considered grave if there is formation of the urethral fistula on migration of the urinary catheter. In females, the management of retention of urine is comparatively easier and chances of complications are also low. During handling of dystokias, urethral passage may get injured along with vaginal passage. These urethral injuries can cause severe straining which may result in eversion of urinary bladder. After eversion of urinary bladder, the animal can not pass urine until bladder is placed back to its normal position. Such type of condition is very rare in buffaloes. The present report describes five such cases where this type of complication was observed.

History and clinical examination: Five adult buffaloes were admitted to the veterinary clinics of university with complaint of not passing urine after third day of relieving of dystokia. After a gap of three to seven days after calving, the buffaloes were off-feed and were constantly straining. The owner of the buffaloes told that in all cases, foetuses were delivered by manual traction and foetal membranes came out spontaneously. Immediately after calving, the buffaloes started straining while passing urine and faeces. The urine flow was not smooth and not coming in smooth stream. The buffaloes were trying to urinate repeatedly. The faeces were hard and scanty. Out of five, the two affected buffaloes showed yellow round coloured bulging in the vaginal passage, one showed collapsed

whitish bag at the bottom of vagina (Fig 1) and the remaining two showed hanging whitish structure with little quantity of fluid at the bottom. There was complete stoppage of urine in all buffaloes.

On examination, the yellow bulging was soft and fluctuating and hand could be easily inserted into the vagina. The bulged structure was coming from the urinary



Fig 1. Everted intact urinary bladder after evacuation of urine.

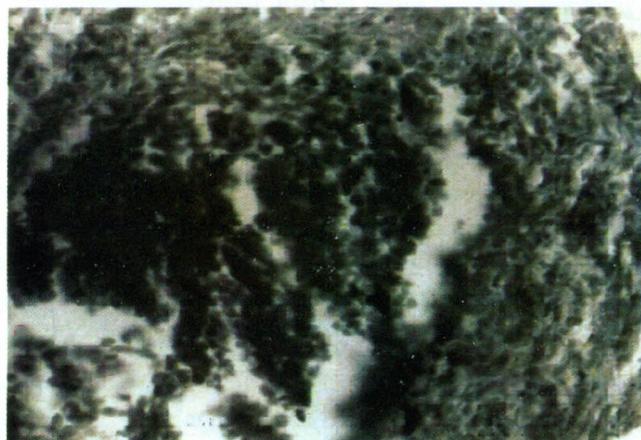


Fig 2. Urinary bladder showing infiltration of neutrophils.

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passage. On test puncturing of the bulging, urine started flowing confirming the structure to be urinary bladder. In three buffaloes also, vaginal passage was clear but the structures were collapsed indicating rupture of urinary bladder. One was small in size and other two were larger and hanging with little amount of urine. A small piece of hanging urinary bladder was collected in formal saline and sent for histopathological examination. Urine samples were also collected for bacteriological examination.

The first three buffaloes were quite normal but the buffaloes with hanging ruptured bladder were somewhat dull. There was no major change in rectal temperature, heart rate and respiration rate. The lowering of haemoglobin content was observed in buffaloes whose urinary bladder was ruptured and hanging. In these buffaloes, neutrophilia with slight increase in total leucocytic count was also noticed. Microscopic examination of urine of all buffaloes showed mainly the presence of erythrocytes and pus cells. Histopathological examination revealed presence of haemorrhage and infiltration of polymorph cells in the wall of urinary bladder (Fig 2).

Cultural examination of urine revealed mixed type of infection with *E. coli*, *Staphylococcus* spp., *Micrococcus* spp. and *Bacillus* spp. which were found sensitive for cephaloridine, nalidixic acid, nitrofurazone, chloramphenicol and doxycycline.

Treatment: The buffaloes were sedated with xylazine and epidural analgesia was achieved by administering 2% lignocaine HCl between 1st and 2nd lumbar vertebrae. The urinary bladders were flushed with sterile normal saline solution and the accumulated urine was evacuated by disposable 16 gauge needle in first two buffaloes. The ruptured urinary bladders were repaired by lock stitch sutures using chromic catgut no. 3 in last three buffaloes. The urinary bladders were well lubricated with liquid paraffin mixed with betamethasone and powdered nalidixic acid tablets. After attaining normal texture and size, the bladders were pushed into the urethra by applying force with both thumbs. When the bladders were in their passage then slight push from index finger and appropriate size catheter were sufficient to bring it in normal position. After replacement of urinary bladder, the vaginal floor was also sprayed with paraffin mixture. After proper positioning of the bladder, the buffaloes were administered i/m with cephaloridine (3.0 g, b.i.d) for 7day, meloxicam (30 ml, b.i.d) and B-complex (10 ml, b.i.d) for 5 days. To maintain tone of the urinary bladder, 10 ml each of injectable neuroxin-12 and calcium (i/m) for 5 days and neostigmine (4 ml, s/c, t.i.d.) for 3 days were given. The buffaloes with intact bladder started passing urine after its

replacement without any complication. In ruptured urinary bladders, it became functional only in one case but in buffaloes whose ruptured bladder was thin walled and hanging could not respond to the treatment and could not pass urine and animal died after one month of parturition.

Discussion: Diseases of the urinary bladder are not common in bovine. Sometimes it can be seen in new born calves such as agenesis of urinary bladder and partial development of urinary bladder (Noh, *et al.*, 2003) but in adult animals, chances of involvement of urinary bladder are very rare. The eversion of urinary bladder can occur in adult females as a result of constant straining due to irritation in the urinary passage. The most important cause of irritation can be injuries caused by rough manipulation during handling of dystokia. The other causes encountered in buffaloes are urithritis, urethral stenosis due to trauma, infection or tumourous growth (Singh, 1997). Sometimes, in cases of torsion of uterus also urinary passage gets occluded.

The eversion of urinary bladder can cause partial or complete blockage of the urethral opening depending upon the degree of eversion. In the present study there was complete eversion and subsequent stoppage of urine. The everted urinary bladder can be confused with tumour, placenta or prolapse of vagina which can be differentiated easily on the basis of physical appearance and other tests. The eversion of urinary bladder can be confirmed on the basis of test puncture and presence of urine in the structure. In the present study, five such cases of everted urinary bladder were observed in buffaloes following handling of dystokias. In domestic animals, such type of complication during parturition has been reported in mare (Singh and Bugalia, 2001) because during foaling violent straining and long limbs of the foal can cause injuries to the vagina and perineum resulting in eversion of urinary bladder. In the present report also out of five buffaloes, three buffaloes could be managed successfully which included two buffaloes with intact and one buffalo with ruptured urinary bladder walls. In remaining two cases, where bladder wall was thin and soft, the bladder could not become functional and the buffaloes could not pass urine.

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