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SURGICAL MANAGEMENT OF HYPOSPADIAS IN A NEW BORN CAMEL CALF

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ABSTRACT

A ten-day-old camel calf was brought to the clinic with a history of difficulty in urination. On examination, the urethral opening was located at the bottom of a pouch present in the perineal area. There was no development of the preputial skin at its normal position, i.e. in between the two thighs. At the bottom of this pouch, there was a mark for urethral opening and through this under developed urethral opening, urine drops were dribbling out after great effort. The ultrasonographic image of the urinary bladder by rectal probe depicted hyper-echoic bladder content and thickened bladder wall. The urethral opening was dilated under local infiltration analgesia. The urethra was sutured with skin pouch to make a permanent opening, i.e. urethrostomy. The camel calf started passing urine smoothly through this opening.

Key words: Camel, hypospadias, newborn, ultrasonography, urethrostomy

Hypospadias is a congenital anomaly in which the male urethral opening can be located anywhere along the urethra but not at the tip of the penis. This condition can be seen infrequently in newborn calves, and can lead to difficulty in urination. Sometimes the urethral connection to the skin is incomplete resulting in partial voiding of urine outside the body and accumulation of the urine in the subcutaneous tissue which may cause necrosis of the skin and underlying tissue therefore the accumulated urine need to be removed immediately by surgical intervention. This type of the condition has been reported in goats (Singh, 1989) but not observed in camel calf.

Case history, clinical and ultrasonographical examination

A ten-day-old camel calf was brought to the clinic with the history of difficulty in urination, however, passing of faeces was normal. The location of urethral opening was abnormal and micturition of the urine was drop by drop and painful. The intake of milk and water by the calf was almost normal.

Clinical examination of the genitalia revealed the urethral opening located at the bottom of a pouch present in the perineal area. There was no development of the preputial skin at its normal position. There was only dry umbilical cord hanging from the navel area between the two thighs (Fig 1).

There was presence of a small round pouch at the site of scrotum in the perineal area. At the bottom of this pouch, there appeared a mark for urethral opening. Exploratory puncture of the pouch revealed urine like fluid indicating its accumulation (Fig 2).

The linear probe was put into the rectum for ultrasonography. The distended bladder showed anechoic image of stored urine. There was suspension of the hyper-echoic granules indicating possible presence of infection into the urinary bladder (Fig 3). The ultrasonographic image of penile urethra could not be obtained.

Surgical management

The skin of the pouch area around the mark of urethral opening was desensitised by infiltrating 2% lignocaine hydrochloride. The scrotal pouch was held in position and urethral opening was dilated. Approximately one litre of accumulated urine escaped out and the round bulged pouch got collapsed (Fig 4). The exploration of the pouch cavity showed presence of rudimentary penis attached to the cranial wall of the pouch. There was no sign of presence of testicles inside the scrotal pouch. The penis could not be traced further in between the thighs.

The patent portion of urethra of the rudimentary penis was sutured with the opening mark of the pouch skin using 3/0 chromic catgut towards its ventral side. Four stay sutures were also applied between penis and scrotal pouch to make permanent urethral opening i.e. urethrostomy. The camel calf started

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Fig 1. Absence of preputial skin and presence of umbilical cord hanging in navel region.

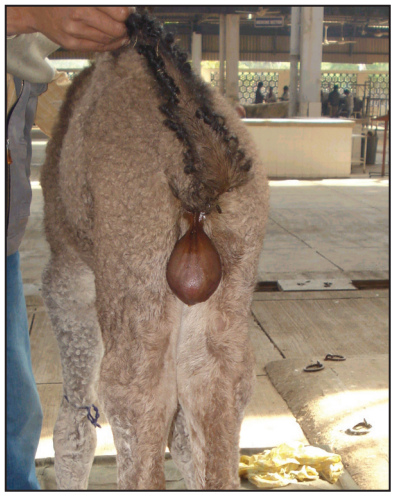

Fig 2. Presence of a round skin pouch as scrotal area with a urethra like opening on ventral aspect.

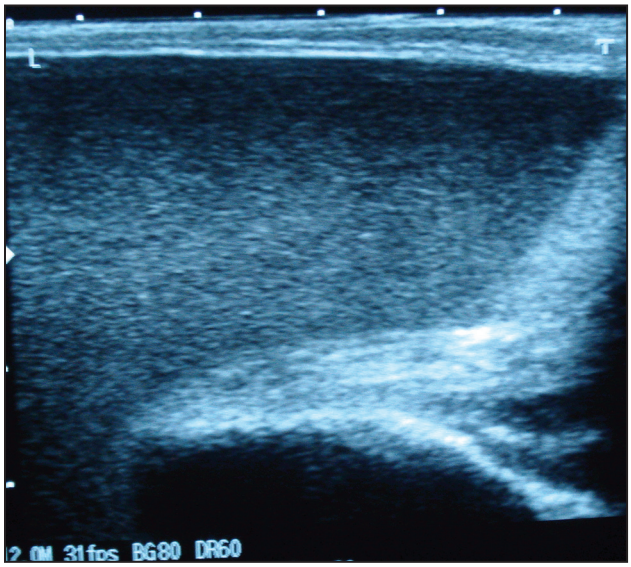

Fig 3. Ultrasonogram of urinary bladder showing anechoic urine with presence of hyper-echoic granules.

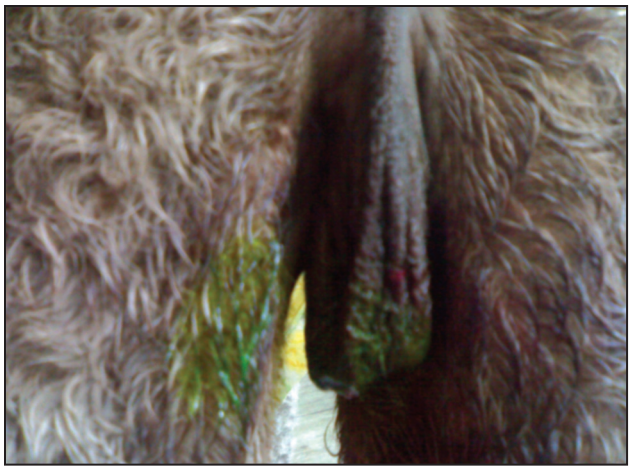

Fig 4. The round skin pouch at scrotal area collapsed after dilatation of urethral opening.

passing urine smoothly through this opening even without passing urinary catheter.

Post-operative treatment given was fluid therapy, antibiotics, anti-inflammatory drugs, urinary antiseptics and vitamin B-complex for five days. The antiseptic dressing of the urethral opening was carried out for ten days. The report received 20 days after urethrostomy revealed smooth flow of urine.

Discussion

The causes of dysuria in calves of other species have been attributed to the congenital defects such as agenesis of urinary system, under development of the penis or urethra and abnormal location and opening of the urethra (Sharma and Singh, 1993). The main cause of dysuria in ruminants has been related to urethritis (Sharma and Singh, 1993), while silica uroliths leads to anuria in camels (Gutierrez *et al*, 2007). The cases of hypospadias also need surgical intervention to correct shape and size of urethral opening. After surgical intervention in such cases, patency of the urinary passage can be maintained by the use of polyethylene catheter. However, in the present case urethrostomy opening was good enough to keep the smooth flow of urine. The hyper-echoic granular image in present case was due to prolonged storage of the urine.

The cases of hypospadias might also be associated with other congenital defects, which are mostly unmanageable (Sharma and Singh, 1993). In the present case, there was neither development of preputial skin nor formation of testicle balls and penis was also rudimentary. The prognosis of such case is usually considered guarded, but case of present report had a successful outcome.

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