

HYOSPADIAS WITH ATRESIA ANI IN A COW CALF

SANDEEP POTLIYA^{1*}, R.N. CHAUDHARY¹, MADAN PAL¹, SARVAN KUMAR² and
SANDEEP KUMAR³

¹Department of Veterinary Surgery and Radiology, ²Department of Veterinary Pathology

³Department of Veterinary Gynaecology and Obstetrics, College of Veterinary Sciences
Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125 004, India

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SUMMARY

One-day old male cow calf was presented with dribbling of urine from a defect in the ventro-median abdomen and absence of anal opening. Clinical examination revealed bifid scrotum with bilaterally descended testes, incomplete prepuccial sheath with urethral opening just cranial to scrotum. Anal opening was constructed surgically and the prepuccial defect in ventral median abdomen was sutured from anterior side, leaving posterior part open for passage of urine. Emollients were applied on the exposed part. The calf survived up to the age of one and a half month.

Key words: Atresia ani, calf, hypospadias

Hypospadias is a rare congenital defect which involves imperfect closure of external male urethra (Radostits *et al.*, 2007). It occurs as a result of failure of the genital folds and genital swellings to fuse normally during foetal development which causes abnormal development of the penile urethra, penis, prepuce and sometime scrotum (Fossum *et al.*, 2007). The present paper reports an unusual case of hypospadias with atresia ani in a calf.

One-day old cow calf was presented in Teaching Veterinary Clinical Complex with history of dribbling of urine from an abnormal location and absence of anal opening. On physical examination, it was observed that prepuccial sheath was incomplete and thin mucosal urethra with urethral opening was present within a skin defect on ventral abdomen (Fig. 1). Further examination revealed bifid scrotum and atresia ani. Hence the case was diagnosed as hypospadias with atresia ani.

For surgical management, the calf was sedated with xylazine hydrochloride @ 0.01mg/kg IV. After debridement of edges of anterior portion of prepuccial defect, skin was closed with simple interrupted pattern by using sterile silk suture (#1). In posterior portion of defect, an opening was left and mucosal urethra was fixed with non-absorbable suture material to skin for passage of urine. Bismuth iodoform paraffin paste (BIPP) was applied as an antiseptic at the surgical sites. Surgery for atresia ani was performed by excision of the bulged portion of skin by circular incision below tail and suturing of anal mucosa with skin using sterile silk (#1) in simple interrupted manner.

*Corresponding author: sandeepotliya@gmail.com

A plastic nozzle was fixed inside lumen of anus to maintain patency. Antibiotics (Inj. Biotex, 500 mg) and anti-inflammatory (Inj. Melonex, 2 ml) drugs were administered for five days along with antiseptic dressing of the wounds on abdominal and anal regions. Calf started taking feed and water and also started passing faeces and urine normally. The owner reported that the calf died after one and a half month.

Hypospadias is a rare congenital anomaly characterized by abnormal and incomplete formation of the penile urethra. This anomaly can occur anywhere in urethra from the penis to the perineum, and it is often associated with failure of fusion of the prepuce. The penis is either under developed or absent (Bjorling, 2003). In the present case there was absence of penis and prepuce, and the urethral opening was present in ventro-median abdomen just cranial to scrotum. Similar findings have been reported by Alam *et al.* (2005). Hypospadias has been reported to be commonly associated with other congenital anomalies. Alam *et al.* (2005) reported three congenital anomalies viz. undescended, hypertrophied and cryptorchid testis alongwith hypospadias in three calves. In the present case, testes descended bilaterally in scrotal sacs and anal opening was absent. Several surgical procedures (prescrotal urethroostomy, perineal urethroostomy) have been prescribed depending upon anatomical location of urethral orifice and severity of clinical signs (Alam *et al.*, 2005). In the present case, partial closure of urethral defect was performed and urethral passage in posterior part was left open. Atresia ani was managed surgically in a routine manner. Partial wound dehiscence resulting in second



Fig 1. Hypospadias calf having bifid scrotum, incomplete prepuce with urethral opening within skin defect present just cranial to scrotum and having atresia ani

intention healing of the incision has been reported as postoperative complications in a calf suffering from

hypospadias (Alam *et al.*, 2005) which could also be the reason of death in the present case.

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