

SURGICAL MANAGEMENT OF CONGENITAL URETHRAL DIVERTICULUM IN A KID

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Introduction

The domestic goat (*Capra hircus*) shares some of the congenital abnormalities generally seen in other domesticated ruminant animals (Dennis, 1993). Congenital defects, abnormalities of structure or function present at birth, may be caused by genetic or environmental factors, or a combination of both and in many cases the causes are unknown. Developmental defects may be lethal, semi-lethal, or compatible with life causing aesthetic defects or having no effect on the animal. Susceptibility to agents that affect development varies with fetal stages, but in general decreases with gestational age (Johnson et al, 1985). Urethral diverticulum is the accumulation of urine in the diverticulum below the penile urethra. Hypospadias is associated with urethral diverticulum (Horst and George, 1996). Hypospadias is a defect of the external genitalia characterized by an incomplete development of the prepuce with a ventral opening in the urethra at some point along the penis or the perineum due to lack of partial fusing of the urethral fold (Dennis, S.M. and Leipold, H.W., 1979. , Ovine congenital defects. Vet. Bull. 49, pp. 233-239 Dennis and Leipold, 1979). Urethral diverticulum was mostly found in kids. Generally, it was large in size affecting most of the penile urethra. This paper discusses the successful

surgical management of urethral diverticulum in a kid.

Case history and findings

A male one month old crossbred kid was presented to the Large Animal Out Patient Unit of Madras Veterinary College Teaching Hospital, with swelling on the perputial region, since birth. Straining and vocalization during urination was also reported. Physical examination revealed a narrowed urethral process and a cystic swelling 3 cm caudal to the prepuce orifice and ventral to the penis. Compression of the swelling revealed expression of jet of urine through the urethral process and confirmed as urethral diverticulum (Fig. 1). The kid has no other congenital defects.

Treatment and discussion

Tetanus toxoid injection (5 LF units) was given prior to surgery. The kid was prepared for surgery using xylazine-ketamine anaesthesia. The surgical site was prepared aseptically. A linear skin incision was made on the ventral aspect of the diverticulum and the urine was drained out. Sac like skin was trimmed off. The opening of fistula was located and a simple interrupted suture was placed to appose the urethral mucous membrane using PGA 6-0.

Figure 1: Urethral diverticulum before surgery

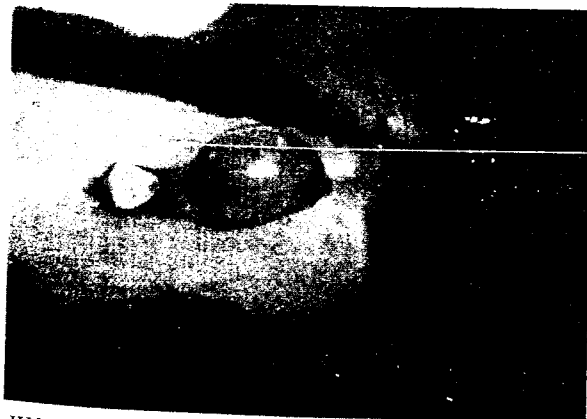


Figure 2: Urethral diverticulum after surgery



Adjacent fascia was mobilized over the sutured orifice (sliding fascial flap technique) and sutured using 5-0, PGA. Redundant tissues were removed and the skin was closed by 4-0, silk. The kid was given procaine penicillin at a dose of 20,000IU/kg, IM, for seven days. Postoperatively, penile urethra healed without any complications (Fig. 2).

The kid's appetite and attitude improved on the 2nd postoperative day, and urination was normal. Skin sutures were removed eight days after surgery. Since chances of inheritance were suspected, castration was advised. Urethral diverticulum and hypospadias occurs sporadically in kids and lambs. Surgical correction was not recommended when the anomaly coexists with other malformation (Sharma and Jit singh, 2002). The authors also suggested that when urethral diverticulum is not associated with other malformation, surgical correction could be attempted. This was in concordance with the present case.

Conclusion

Sliding fascial flap technique found to be a successful procedure in the surgical management of congenital urethral diverticulum.

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