Short Communication / Kısa Bilimsel Çalışma

Penile urethral diverticulum in a kid

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Summary: A 16-day-old, male, crossbred kid was presented with a history of a poor suckling reflex, stranguria and dysuria. The owners noticed that the animal was vocalizing and straining to urinate. Physical examination revealed a narrowed urethral process and orifice that caused formation of a penile urethral diverticulum. The narrowed urethral process was removed with scissors. Penile urethral diverticulectomy was performed by the guidance of urethral catheter. Postoperatively, penile urethra and urethral orifice were both appeared to be healed without any complications, and the clinical problems observed preoperatively were recovered.

Key words: Diverticulectomy, diverticulum, kid, stricture, urethral orifice.

Bir oğłaka penil uretral divertikülü


Anahtar sözcükler: Divertikülektomi, divertikülium, oğlak, striktür, uretral delik.

Congenital anomalies of the urinary system occur rarely in ruminants; however, a wide variety of anomalies may be encountered. A survey of urinary system defects in lambs revealed the following abnormalities: hypospadiasis and patent urachus (2). The most common defects seen are patent urachus, hypospadiasis and renal agenesis. Defects are frequently present in multiples and are often seen with anomalies of other system. Hypospadiasis are found in association with hermaphroditism in goats; other defects are uncommon (3,6). The urethral process is commonly amputated therapeutically and sometimes prophylactically in male small ruminants breeding (7). There are very few reports of urethral diverticulum in goats and kids (1,4,5). This case report describes the clinical findings and surgical treatment of the penile urethral diverticulum in a kid.

A 16-day-old, male, crossbred goat kid was referred to the Clinic of Surgery, Faculty of Veterinary Medicine; University of Akdeniz, because of a poor suckling reflex, dysuria of 15 days' duration and evaluation of a cyst-like structure on the prepuce. The owners noticed the animal was vocalizing and straining to urinate.

The kid was depressed, tachycardic (120 beats per minute) but had a normal rectal temperature (39.1 °C). Results of physical examination were dribbling of urine from the prepuce and protruded glans penis and urethral process from the preputial sheath (Figure 1). The kid was restrained in dorsal recumbency; the preputial skin was retracted caudal by an assistant percutaneously. It was observed that the urethral process and glans penis were lightly adhered to the prepuce. The urethral orifice and process were narrowed. The most important finding was the penile urethral diverticulum, which was situated 2 cm caudal to the preputial orifice and measured 4 cm in diameter. No abnormalities such as cryptorchidism, hermaphroditism, dilated bladder, other than a narrowed urethral process and orifice that caused to formation of a penile urethral diverticulum were observed in a kid described in this report.

Urine was voided from the external urethral orifice when the swelling was manually compressed. We were unable to catheterize the urethra due to narrowed urethral orifice. Dry chemical analysis of the urine revealed hemoglobinuria (4+), alkaluria (pH, 8.5). An ultrasound evaluation of the abdomen in transverse and sagittal
planes did not demonstrate abnormalities in the fluid-filled bladder and there was no evidence of free fluid in the abdomen.

Xylocaine jelly (2%) was applied topically to desensitize the prepuce and glans penis. The urethral process and glans penis were freed with gentle caudad traction of the prepuce. The narrowed urethral process was amputated with scissors and then the urine was spontaneously voided without difficulty. A lubricated sterile 3.5 F catheter was placed into the urethra. The kid was prepared for aseptic surgery. An intravenous catheter was placed in left jugular vein and lactated Ringer’s solution (2 mg/kg/h) was administered during operation. Sedation and analgesia were provided by xylazine hydrochloride at 0.2 mg/kg, IM and anesthesia was induced with ketamine hydrochloride at 10 mg/kg, IM. The kid was placed in dorsal recumbency. Penile urethral diverticulectomy was performed by the guidance of the urethral catheter. Utilizing fine scissors, a large elliptical skin and urethral mucosa was removed approximately up to the diameter of the intact urethra (Figure 2). Urethra and skin sutured with 4-0 polyglactin 910 (Vicryl) and 4-0 silk (Mersilk) in a simple interrupted pattern, respectively. The kid was injected with penicillin G procaine at a dose of 25,000 IU/kg/day, IM, for seven days. The urethral catheter was allowed to be in place for 8 days by suturing its tip to the preputial skin. Urethral catheter and surgical site were protected from self-mutilation by the patient with Elizabethan collar. On day 2, the kid’s appetite and attitude had improved markedly.
and urination was normal. Eight days after surgery, urethral catheter and skin sutures were removed. Penile urethra and urethral orifice were both appeared to be healed without any complications, and the clinical problems observed preoperatively were recovered. At three months following surgery, a telephone conversation revealed that the kid was urinating normally and no adverse clinical or behavioral signs were reported.

In our case, the penile urethral diverticulum was treated by diverticulectomy after amputation of the narrowed urethral process. The kid was discharged within 5 days, and was managed at home. This case suggests us that surgical correction of narrowed urethral orifice and urethral diverticulum result in successful treatment.

References

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