

SURGICAL MANAGEMENT OF PRESCROTAL URETHRAL STONES THROUGH URETHROSTOMY IN SPITZ DOG

M. Sahoo¹, B. Jena¹, I. Nath², E.S. Kumar³, N. Dillip³

¹Assistant Professor, ²Professor and Head, ³M.V.Sc. Students, Department of Veterinary Surgery and Radiology, Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar

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A 10 years old spitz male dog was presented with the complaints of discomfort during urination, frequent straining and prolonged futile attempts to urinate. After clinical findings, urethrostomy was performed under general anaesthesia and a many small stones was removed, followed by fruitful recovery.

Keywords: Prescrotalurethral stones, Urethrostomy.

Urolithiasis is the disease of prime importance in domestic animals all over the world. Among dogs, Uroliths are organized organic and inorganic solutes that precipitate around the nidus because of oversaturated urine (Breshers and confer, 2017). Contrary to the human being, the kidney is not the common site for lodgement of calculus in dog, as about 95% of calculi in dog are found either in the bladder or urethra and bladder together (Uma *et al.*, 2018). Kokila *et al.*, (2023) successfully managed cystic urethral calculi in a 6-yr old male mongrel dog with cystotomy and urethrotomy. The incidence of obstructive urethral urolithiasis was more common in adult castrated male dogs where as cystic calculi was more common in female dogs (Njoku *et al.*, 2021). An urethrostomy creates an opening directly in front of the scrotum. The penis is left intact, and most often the dogs will continue to exhibit the same voiding behavior, such as lifting their leg, even though the urine is voided from a different area. Therapy of struvite urolithiasis should encompass relief of obstruction to outflow when necessary, elimination of existing calculi, eradication or control of urinary tract infection, and prevention of recurrence.

Case History and Observations

A 10 years old spitz intact male dog weighing 10kg was presented in the Department of Veterinary Surgery and Radiology, CVSc & AH, OUAT, Bhubaneswar. The owner had the complaint of severe pain during urination for last 5-6 days and dribbling of blood tinged urine. Animal was anorexia since last 7 days, dull and depressed. On clinical examination the condition of the dog was anaemic and abdomen was moderately distended. The body temperature was slightly elevated, heart rate & respiratory rate were increased too. Palpation of abdomen revealed distended bladder. After physiological and clinical examination, Catheterization was attempted and which revealed obstruction just caudal to the os penis. An emergency urethrostomy was done.

Materials and Methods

The animal was anaesthetised with atropine, xylazine and ketamine and maintained with ketamine with the patient in dorsal recumbency. The scrotal and prescrotal area was washed, clipped and prepared for surgery. A flexible and sterile naso-gastric catheter was inserted in urethra upto the level

of obstruction and a 2 cm midline incision was made at pre-scrotal. Incise subcutaneous fat to expose the ventral penile body and the retractor penis muscle attached to the penis. Bluntly elevate the retractor penis muscle and displace it laterally to either side, exposing the urethra. The urethra was purple and located on the ventral midline of the penis (Fig.2). Use the thumb and index finger of your nondominant hand to elevate the penis from the incision before incising the urethra, which results in decreased hemorrhage from the incised corpus spongiosum tissue surrounding the urethra.

Using a scalpel blade to incise the urethra on the midline over the previously placed urethral catheter. After entering the urethral lumen, myoscissors were used to extend the mucosal incision to a total length of 3 or 4 cm. Digitally elevate the urethra to decrease hemorrhage. Suctioning improves the visibility of the urethral lumen and,

especially, the urethral mucosal edge, which tends to retract away from the penile body. Using 4-0 polypropylene suture on a tapered needle, suture the cranial and caudal aspects of the urethral incision to the skin to establish the boundary of the urethrostomy. Careful suturing of the urethral mucosa to the skin is emphasized. The sequence of urethrostomy suturing is as follows: First incorporate a 2- or 3-mm piece of urethral mucosa only, then a small piece of the tunica albuginea (white fibrous-appearing tissue of the penis), and, finally a small, angled piece of the scrotal skin with the needle. The skin pierce engages the dermis and epidermis only. This sequence of needle passage produces compression of the corpus spongiosum tissue and reduces postoperative hemorrhage from incised tissue.

At the conclusion of surgery, a 14 no. Foley's yellow rubber catheter easily passed from the urethral stroma to the urinary bladder and fixed at the base.

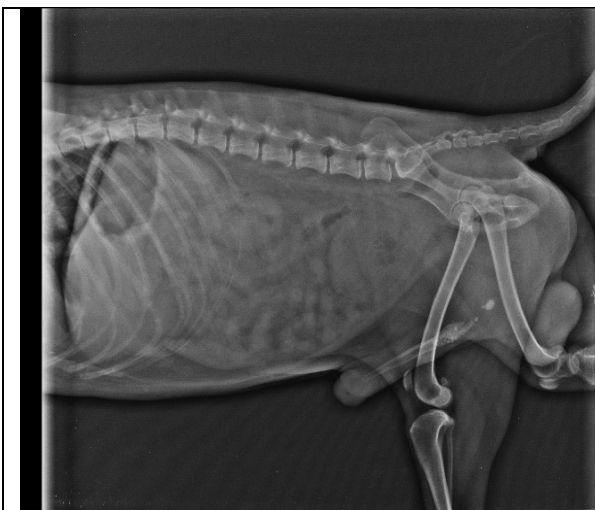


Fig.1 X-ray of abdomen showing urethral prescrotal stones before surgery

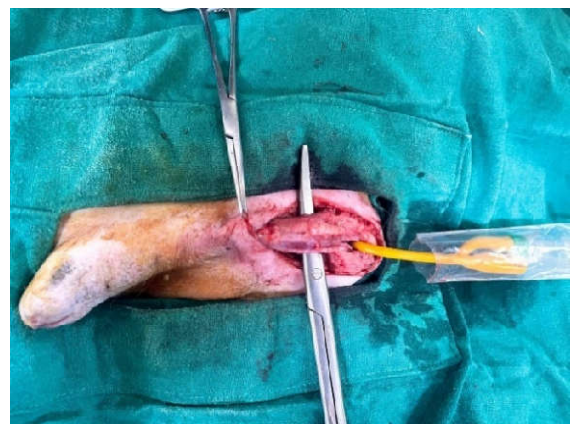


Fig.3 Surgery showing lifting of urethra and fixation of Foley's catheter no.14 with dribbling of urine through catheter

Results and Discussion

Urethrostomy was performed to diminish the risk of urethral obstruction due to recurrent urinary calculi that are not likely to be resolved with medical therapy. Complications of urethrostomy in dogs

include hemorrhage from the urethra during the immediate postoperative period and an increased risk of urinary tract infection long term. Stricture of the surgical site is uncommon because of the width of the urethra at this level. Hemorrhage and stricture

are both minimized by accurate apposition of the urethral mucosa to the skin. Urethral catheterization is not maintained after surgery. Placed a self-restraint Elizabethan collar advised to keep it on the patient for one week. Antibiotic and analgesic were given for 5 days postoperatively. Occasional dripping of blood concurrent with or at the end of urination was common for the first three to five days after surgery. Nonabsorbable sutures removed two weeks after surgery with the patient sedated, and absorbable sutures fall out spontaneously followed a fruitful recovery.

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