

# TUBE CYSTOSTOMY TO RELIEVE OBSTRUCTIVE UROPATHY IN TWO TOM CATS

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A 20 days old male non descript kitten and two years old Persian tom cat were presented with history of anuria since 24 hours. On clinical examination both felines were lethargic and off feed. The kitten had pubic swelling which was confirmed as subcutaneous urine infiltration due to urethral rupture and a swollen glans, while the adult feline had distended urinary bladder. On ultrasound examination the bladder was intact and distended. Emergency tube cystostomy was performed using Foley's catheter. Both cats made an uneventful recovery and sutures were removed on seventh postoperative day.

**Keywords:** Anuria, Feline, Foley's catheter, Tube cystostomy, Urethral rupture.

Tom cats housed in groups suffer from 'Feline lower urinary tract disease, probably because they share the same litter box amongst many other reasons (Hostutler *et al.*, 2005). The disease gets most frequently diagnosed in advanced stage when the cat exhibits obvious discomfort due to inability to urinate leading to distension of urinary bladder on the verge of rupture. Two such cats with severely distended urinary bladder and inability to void urine were relieved by tube cystostomy.

A 20 days old male non descript kitten and two years old Persian tom cat were presented with history of anuria since one day. The kitten had a subcutaneous abdominal swelling with phallitis. Needle aspiration of the swelling revealed subcutaneous urine accumulation confirming urethral rupture. Trans-abdominal ultrasonographic examination with 3.5- 5 MHz transducer revealed a distended urinary bladder with thickened wall, while in kidney dilated renal medulla and pelvis were observed. The temperature, respiration rate and heart rate were elevated in both cases. In both cases complete blood count was within normal range, except neutrophilia in the adult tom. Acute obstructive uropathy causing urethral rupture and cystitis were diagnosed in a kitten and tom cat, respectively.

In both cases, emergency tube cystostomy was done to avoid bladder rupture and to relieve the backpressure on kidneys. The general anaesthesia was induced and maintained

with a combination of Inj. Ketamine @ 4 mg/kg. b. wt. + diazepam @ 0.5 mg/kg. b. wt. A caudal ventral midline incision was used to approach the bladder and the 8 F Foley's Catheter was introduced through a separate stab incision at paramidline and secured in urinary bladder using purse string suture followed by distension of bulb (Fig. 1). In the kitten four stab incisions were given on the skin above the swollen part to drain the subcutaneous urine. The laparotomy wound was closed in routine manner and post operative clindamycin @ 10 mg/kg. body weight I/M, Inj. Tramadol @ of 1.0 mg/kg. body weight I/M once daily for five days. On the 2<sup>nd</sup> post operative day, swelling reduced markedly in the kitten and both cats resumed feeding and water intake. On the 7<sup>th</sup> post operative day, catheter was removed when urination started normally (Fig.2).

Obstructive uropathy mostly affects cats but is a rarity amongst queens as also reported by Forrester and Towell (2015). It occurs concurrently with lower urinary tract disease as observed in present report. The occult underlying symptoms were not noticed by both the owners till complete obstruction was manifested. The urethral obstructions due to physical causes like mucus plug, calculi, stricture or neoplasm as have been reported by different authors (Segev *et al.*, 2011 and Forrester and Towell, 2015), however no physical obstruction could be identified on ultrasound but a thickened bladder was visualized in adult tom. In concurrence with

our study, Sumner and Rishniw (2017) attributed up to 53% of urethral obstruction in male cats to be idiopathic due to urethral spasm and edema.



**Fig 1 Tube cystostomy in 20 day old kitten**

measured. The bladder thickening as well as dilated medulla and pelvis of kidneys could be visualized clearly but not the urethra as also mentioned by Juszczuk *et al.* (2006). Dilated renal medulla frequently hints towards back pressure of urine leading to hydronephrosis as also recorded by Hansen *et al.* (2015) and hence emergency tube cystostomy helped to not only to preclude bladder rupture but also further renal damage. Our study was in agreement to Gaber *et al.* (2014) who reported that tube cystotomy was superior technique in managing urethral obstructions as it maintained urethra integrity for breeding and urination while marsupialization compromised both. The in-situ inflated cuff of foley's catheter was clearly demonstrated on B- mode ultrasound in accordance with Gaber *et al.* (2014).

Although complications like tube dislodgement, uroperitoneum and tube blockage have been observed as also reported by Fortier *et al.* (2004) and Gaber *et al.* (2014). In the present case, both cats made uneventful recovery with removal of tube seven days after surgery and resumption of normal urination.

## References

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Ultrasonography is a vital technique while evaluating urinary system as not only the small radioluscent calculi as well as thickness of urinary bladder wall could be



**Fig. 2: Tom recovered from tube cystostomy**

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