Urethral intussusception following traumatic catheterization in a male cat

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Introduction: In cats, differential diagnoses for urethral obstruction include urolithiasis, idiopathic diseases (plug +/- spasm), neoplasia, urethral stricture, anatomic malformations and foreign bodies. Urethral injuries may result from pelvic fractures, vehicular trauma, urethral calculi, gunshot trauma, bite wounds or urethral catheterization.

Case description: A 8-year-old 4.2-kg castrated male European shorthair cat was referred for lower urinary tract obstruction. The cat had presented multiple episodes of signs of feline lower urinary tract diseases within the past 2 years. Before referral, the cat was presented to the primary care veterinarian for anuria. Urinalysis revealed struvite crystalluria and the presence of *E. Coli* urinary tract infection. The cat was catheterized and referred for further investigation.

During physical examination, a urethral mass was identified per rectal palpation. On abdominal ultrasonography, calculi/crystals were present in the bladder and the urethra. A hypochoic, asymmetrical circumferential thickening of the urethral wall was visible using a perineal approach (Fig. 1). On positive retrograde cysto-urethrography, an asymmetric circumferential urethral intramural lesion was suspected caudally with a focal and ampullar dilation of the pelvic urethra (Fig. 2), consistent with the presence of a tumor, less likely other intramural lesion. Transrectal ultrasound-guided fine needle aspiration of the mass revealed polymorphonuclear cells with intracellular bacteria and no signs of malignancy. Surgical approach via a perineal urethrostomy was planned in order to relieve the obstruction and resect the suspected mass.

Once the location of the suspected urethral mass was identified, intussusception of the urethra with a complete avulsion of the penile part of the urethra and partial rupture of the urethra at the site of intussusception could be visualized (Fig. 3). After removal of the caudal part of the urethra and penis, the perineal urethrostomy was carried on (Fig. 4).

Results: Following recovery from anesthesia, the cat presented normal urination. Three weeks after surgery, the owners reported normal urination with no sign of stranguria, hematuria or dysuria.

Conclusion: This is the first report of urethral intussusception following traumatic catheterization in a cat. Urethral intussusception can create a mass effect on abdominal ultrasonography and retrograde cysto-urethrography. This should be taken into account in the differential diagnoses of a urethral mass.