

## **URETERAL CALCULI IN CATS: RETROSPECTIVE ANALYSIS OF SIGNALMENT, CLINICAL DATA, MEDICAL MANAGEMENT AND SHORT-TERM OUTCOME IN 83 CASES (2005 - 2013)**

A. Baril, G. Benchekroun, M. Manassero, C. Chery, A. Decambron, C. Maurey  
ENVA, Maisons alfort, France

Ureteral urolithiasis is an emerging medical concern in cats. There are few reports on epidemiology, diagnosis or medical management of ureteral calculi in cats, particularly in Europe.

Cats diagnosed with ureteral urolithiasis in the teaching hospital of the veterinary school of Alfort from 2005 to 2013 were included in this study. Diagnosis was confirmed with radiographs, ultrasound scan and/or laparotomy. Signalment, clinical signs, clinicopathologic and diagnostic imaging findings, medical treatment and outcome were recorded. Epidemiological data were compared to a reference population of 7600 cats.

Eighty three cats were included in the study. The occurrence of ureteral urolithiasis was significantly higher in Birman (OR 20.11 [11.77 - 34.35]) and Siamese cats (OR 2.78 [1.2 - 6.45]). The mean age was 7 +/- 3.5 years [1 - 14 years]. Clinical signs included dysorexia (54/69), lethargy (53/69), weight loss (40/69) and vomiting (38/69). Polyuria and polydipsia were present in 24/69, 13/69 had a dysuria and 12/69 had an abdominal pain. Renal asymmetry was detected on 38/69 cats. 76/71 were azotemic, 16/65 cats were hyperkaliemic, and 8/65 cats were hypokaliemic. 4/55 cats were hypercalcemic. 45/56 were anemic. Ureteral calculi (n=80) were unilateral in 52/69 cats and bilateral in 17/69 cats. Half were located in the proximal third of ureter. Thirty per cent were located in distal ureter. Medical treatment included parenteral administration of fluids (n=68/68), alpha blockers (n= 56/68), amytryptillin (n=41/68), antibiotics (n=52/68) and diuretics (frusemide 17/68, mannitol 27/68). Improvement of renal function and/or hydronephrosis was observed in 33/68 cats. Among those, spontaneous elimination of the calculi occurred in 4 cats (group A). There was no migration of the calculi but improvement of azotemia in the others(group B). No improvement was observed in 35/68 (Group C). Measurements of urolithiasis on radiographs were compared within the 3 groups. Mean length was respectively 1.4mm[1-3], 2.5 mm[0.9-4.1], and 2.4 mm[1-4] in group A, B, and C. Mean width was respectively 1 mm[1-1], 1.6 mm[0.9-3.1] and 1.8 mm[0.8-3.6] in group A, B, and C.

To the author knowledge, it is the first time that a higher prevalence of ureteral calculi in Birman cats is reported in Europe. Spontaneous elimination of calculus is associated with a small size (<1.5mm). If the size of calculi tends to be bigger in cats with no improvement of renal function after medical treatment, prospective studies are still needed to determine the best medical treatment.

**Conflicts of interest:** No conflicts of interest reported