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URETHRAL OBSTRUCTION AND POSTRENAL AZOTEMIA IN A ONE YEAR OLD INTACT MALE CAT

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Abstract: Urethral obstruction and postrenal azotemia are potentially life-threatening conditions commonly seen in male cats. This case report describes a one-year-old intact male European cat presented to the Internal Medicine Clinic of Veterinary Faculty in Timișoara with a three-day history of inability to urinate, lethargy, and abdominal pain. Clinical examination revealed a distended urinary bladder, and postrenal azotemia was confirmed through blood and urine tests. The cat was immediately hospitalized, and a urinary catheter was placed to relieve the obstruction. Treatment included buprenorphine, fluid therapy, and a specialized Urinary and Renal Vet diet. Bladder flushes were performed for two days. The cat's condition improved rapidly, with average urine output resuming and renal function returning to normal. The catheter was removed after five days, and the cat was discharged on a long-term urinary diet after seven days of hospitalization to prevent recurrence. This case highlights the importance of early diagnosis, catheterization, and supportive care in managing urethral obstruction and restoring normal renal function in cats.

Keywords: urethral obstruction, postrenal, azotemia, cat, treatment.

• Introduction

Postrenal azotemia is a severe, potentially life-threatening condition resulting from urinary obstruction and requires immediate intervention. In cats, urethral obstruction, often related to feline lower urinary tract disease (FLUTD), is a known cause of acute renal dysfunction, electrolyte imbalances, and metabolic disruptions. Urethral obstruction increases bladder pressure, causing urine backflow into the kidneys, which impairs critical renal functions and decreases glomerular filtration, leading to uremia, metabolic acidosis, and hyperkalemia. While most feline cases involve mild disturbances, severe urethral obstructions can result in serious metabolic derangements. This report details the case of a one-year-old male European cat with postrenal azotemia from urethral obstruction, outlining key diagnostic findings and interventions—such as catheterization and electrolyte management—essential for restoring kidney function and correcting metabolic issues.

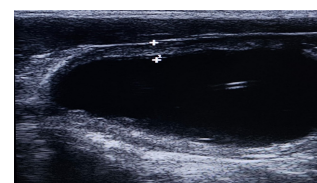
• Material and method

During clinical examination, the cat showed signs of moderate abdominal pain, mild dehydration, and a distended bladder, all indicative of substantial urine retention. An abdominal ultrasound confirmed an enlarged bladder, and a post-void scan revealed a thickened bladder wall, suggesting progression to cystitis. Blood tests showed elevated urea, creatinine, and phosphorus, confirming postrenal azotemia due to urethral obstruction and metabolic imbalances caused by compromised kidney function. The cat was hospitalized, and a urinary catheter was placed to relieve the blockage and re-establish normal urine flow. Treatment included buprenorphine for pain, fluid therapy to support kidney function and correct electrolyte imbalances, and a specialized urinary diet. Bladder flushes with saline were performed for two days to clear the obstruction further. This multi-faceted approach addressed both cystitis and renal impairment, facilitating the cat's recovery.

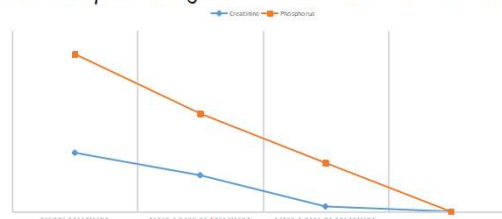
• Results and discussions

The cat's urinary function normalized during treatment, and renal parameters gradually returned to healthy levels. After five days, the urinary catheter was removed, and the cat remained under observation for two more days to monitor for any recurrence. By discharge, laboratory results showed significant improvements, with BUN, creatinine, phosphorus, and total protein levels reaching or approaching normal ranges and reduced bladder wall thickening. These results indicate a robust therapeutic response, restored renal function and improved metabolic balance. A long-term urinary diet and Urinivet Cat Dilution were prescribed to prevent future obstructions, with ongoing monitoring recommended to support continued recovery.

Parameters	Values before treatment	Values after 5 days of treatment	Values after 7 days of treatment	Reference range
BUN	120 5-25	72	22.60	15-37
Creatinine	8.0 0.5-1.5	5	0.7	0.30-1.00
Phosphorus	13.5 0.5-1.5	8.5	6	3.5-7.5
Total Protein	5	6	6.7	5.7-8.9



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• Conclusions

This case report emphasizes the importance of prompt diagnosis and treatment in managing postrenal azotemia, especially in male cats with urethral obstruction. Urethral blockages can quickly lead to serious metabolic issues like uremia, acidosis, and hyperkalemia, which impair kidney function. Immediate catheterization is crucial to relieve the obstruction, prevent permanent kidney damage, and re-establish urine flow. In this case, a combination of antibiotics, pain relief, fluid therapy, and a specialized diet enabled the cat's complete recovery, with renal