

21-22 November 2024

CASE REPORT UROABDOMEN IN INTACT MALE YORKSHIRE TERRIER WITH URETHRAL RUPTURE AFTER VEHICULAR ACCIDENT

I. CRĂCIUN, A. GAVRILĂ, ANDRA JIANU, M. PENTEA, EUGENIA DUMITRESCU

*University of Life Science" King Michael I" from Timisoara, Faculty of Veterinary
Medicine, 300645, 119 Calea Aradului, Timisoara, Romania*

E-mail : ioan.craciun@usvt.ro

Abstract: A 5- month- old entire male Yorkshire terrier was presented for anuria and lethargy of four days duration which had progressed to anorexia, halitosis, abdominal distension and abdominal pain after a vehicular accident. A diagnosis of uroabdomen was made following triage ultrasound, classic radiograph, urethral catheterization and abdominocentesis. The diagnosis of uroabdomen was established after inability to perform urethral catheterization and after abdominocentesis, the resulting liquid had an ammonia smell. The definite diagnosis was established during the abdominal exploratory surgery.

Introduction

Uroabdomen is an accumulation of urine in the peritoneal cavity, retroperitoneal cavity, or both. A loss of integrity of any portion of the urinary tract can cause uroabdomen, the most common site of rupture in dogs being the urinary bladder and pelvic part of urethra. This pathology is an emergency because, urine accumulated in the abdomen is absorbed in the body and this fact produces serious metabolic imbalances.

Material and method

The patient used in this study was a five-months-old intact male Yorkshire terrier, weighing 3 kg with abdominal distension. The study aimed to diagnose the focusing on surgical exploration of the abdominal cavity, identify the site of injury and restore the integrity of urinary tract.

The surgical procedure was performed at the Genesis Veterinary Clinic Timisoara.

The abdomen was tense on palpation with a notable fluid wave and the bladder was empty. The animal was in a state of shock, the mucous membrane appears tacky and pallor, the pulse was weak, the eyes were enophthalmos and the body temperature was decreased, 37.3°C. The urinary bladder catheterization can't be perform because the catheter stops passing at the level of the pelvic portion of urethra.

Serum biochemistry showed azotemia (blood urea nitrogen 197 mg/dl, reference range 9.0–29 mg/dl; creatinine 5.8 mg/dl, reference range 0.4–1.4 mg/dl), mildly elevated total protein 9.6 g/dl, reference range 4.7–7.3 and highly elevated creatine phosphokinase 2000 UI/L, reference range 0–211 UI/L [7, 31, 33]. Complete blood count showed neutrophilic leucocytosis (white blood cells $18.13 \times 10^3/\mu\text{l}$, reference range $6.0\text{--}17.0 \times 10^3/\mu\text{l}$; neutrophils $13.19 \times 10^3/\mu\text{l}$, reference range $3.62\text{--}12.3 \times 10^3/\mu\text{l}$), monocytosis (monocytes $4.37 \times 10^3/\mu\text{l}$, reference range $0.14\text{--}1.97 \times 10^3/\mu\text{l}$) and lymphopenia (lymphocytes $0.56 \times 10^3/\mu\text{l}$, reference range $0.83\text{--}4.91 \times 10^3/\mu\text{l}$).



After exploratory celiotomy has been identified accumulation of urine in the intraperitoneal cavity. Thus, the integrity of urogenital organs was controlled and observed the site of lesion indicated by the site of leakage urine and presences of hematoma around the pelvic portion of the urethra. For a better access at the site of lesion, has been made pubic symphysiotomy and once reached the leakage location the complete oblique section of the pelvic part of the urethra was identified. The lesion of urethra was caused by the bone fragment results from the complete oblique fracture of the ilial bone.

The restoration of the urethra consists of in catheterization of urethra up to urinary bladder, excision devitalized free margins and appositioned the edges by simple interrupted sutures with absorbable threads and the knots placed extraluminal to prevent urethral stricture.

The pubic symphysis is closed by placed two wire cerclage, the medial muscles of the thighs was apposition in a single plan by a continuous sutures pattern with absorbable threads, the abdomen was closed by classic technique and the urinary catheter remain in places after surgery for five days.

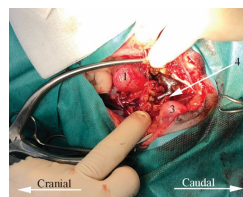


Fig. 3. Intraoperative image showing urethral lesion and leakage of urine;

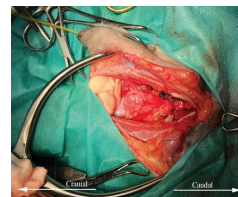


Fig. 4. Intraoperative aspect of urethral reconstruction;

Results and discussions

On recovery from surgery, the patient's urinary catheter was removed after five days from surgery and it was able to urinate without any difficulties and normal posturing with a normal stream of urine was noted. The remainder of its stay in the intensive care until performing the next surgery for pelvic fracture repair, time in which the patient received for seventh days balanced crystalloid fluids intravenously at a calculated rate of maintenance plus per cent dehydration (Ringer Lactat fluid; B. Braun) to correct electrolyte and acid-base disturbance, followed by analgesic medication.

Immediately after surgery, the patient had an appetite and zest for life. At the eight days after perform the surgery, serum biochemical analyze showed normal value of blood urea nitrogen and creatinine.

At 14 days after surgery the threads of suture was removed and the physical examination was unremarkable. The owner reported that the patient continued to urinate without difficulties.



FIG. 5. Final aspect of the skin suture;

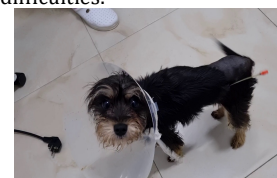


FIG. 6. The patient at 5 days after surgery;

Conclusions

Uroabdomen is a life-threatening condition that requires rapid diagnosis and stabilization of electrolytes, acid-base disturbances, and azotemia before any consideration for advanced diagnostics, anesthesia, and surgery. Once the patient is deemed stable, diagnostics to determine the location of urinary tract lesions followed by surgical repair can be performed.

Acknowledgement: The authors acknowledge the Genesis Veterinary Clinic for the technical support and the loan for use the devices.