

Management of urethral obstructions with stents in dogs

Jordi Manubens, Llain García-Guasch, Miquel Laporta, Manuela Bárcena, Fuco Novoa, Carles Centelles

Hospital Veterinari Molins, Barcelona, Spain

Introduction

Permanent urethral obstruction is usually a severe urinary complication secondary to malignant diseases (lower urinary tract transitional cell carcinoma, prostatic cancer, extrinsic malignant urethral obstructions...) as well as to benign strictures like posttraumatic urethral stenosis. Surgical options like urinary diversion into colon are invasive, costly and can result in secondary medical complications in up to 50% of cases, especially in oncologic patients. The excessive morbidity associated with aggressive surgical management of these tumours combined with the high incidence of distant metastases and surgical complications (hyperamoniemia, azothemia, electrolitic disturbances, pielonefritis, neurological dysfunction...) dissadvice those procedures.

Other options like permanent low-profile cystotomy tubes or permanent urethral catheters are less traumatic but require manual drainage, the catheter can be accidentally misled and can result in chronic infections. Attending those complications self expanding metallic urethral stents (SEMS) placed under fluoroscopic guidance have been proposed as alternative treatment for low urinary tract obstructions (LUTO).



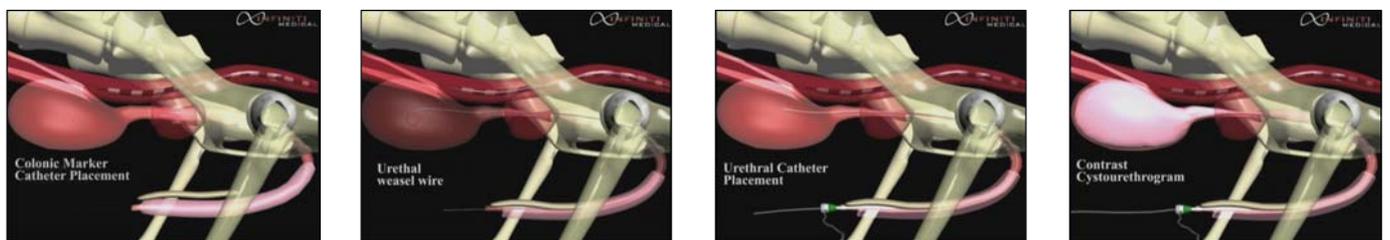
Contrast fluoroscopy of a posttraumatic urethral stenosis.



Contrast fluoroscopy of an urethral obstruction secondary to a transitional cell carcinoma.

Clinical cases

We have recently used those devices in two cases with good result. The first dog was a five years old male cocker with a urethrocutaneous fistula after being hit by a car. Urethral fistula was surgically repaired and a urethral catheter was placed for 10 days. The dog was continent after retrieval the catheter. Three weeks later the dog presented a severe urethral obstruction. By contrast fluoroscopy an urethral stenosis was detected. A SEMS was delivered to resolve the stenosis. Until date the dog remains continent without present any other complication. The second dog was a nine years old golden breed male dog with an urethral obstruction secondary to a transitional cell carcinoma. The owner accepted using a SEMS as palliative treatment. Until date the dog presents intermittent incontinence.



Urethral stenting delivery procedure (courtesy of Infiniti Medical)

Conclusions

SEMS are minimally invasive and can reduce peri-operative morbidity and mortality, requires shorter anesthesia times and shorter hospital stays. SEMS are not exempt of complications like dislocations, infections, foreign body reactions, pseudopolypous mucosal hyperplasia developed over the stent surface, temporary incontinence... but in our reduced experience and reviewing previous published reports, the use of SEMS is a rapidly, safely and effective technique that may improve some cases of LUTO in patients in which other techniques have failed, are not available or not indicated. In our opinion urethral stents for both benign and malignant obstructions will become a routine treatment option in veterinary medicine.

Acknowledgments

The authors wish to acknowledge Infiniti Medical for the support to prepare this poster.



Stent implantation in a dog with an urethral stenosis



Stent implantation in a dog with a lower urinary tract transitional cell carcinoma