

What's your Diagnosis?

Justin Cutillo, Class of 2010

"Ben," 8 year old MC German Shorthair Pointer

Presenting Complaint: Dyschezia & Dysuria

History:

- Ben presented to KSU-VMTH on 3/29/10 for being unable to urinate that day. He also was having difficulty passing feces. He was castrated 1 week prior to presentation.

Physical Exam:

- Ben was found to be quiet, alert, and responsive.
- Vital parameters were within normal limits.
- Moderate periodontal disease.
- Distended abdomen.
- Abdominal palpation revealed a large abnormal structure in the caudal right abdomen.
- Enlarged prostate per rectum.
- 2.5 cm wound at castration incision site at base of penis, bed of granulation tissue present and subcutaneous suture visualized in center.

Diagnostic Tests:

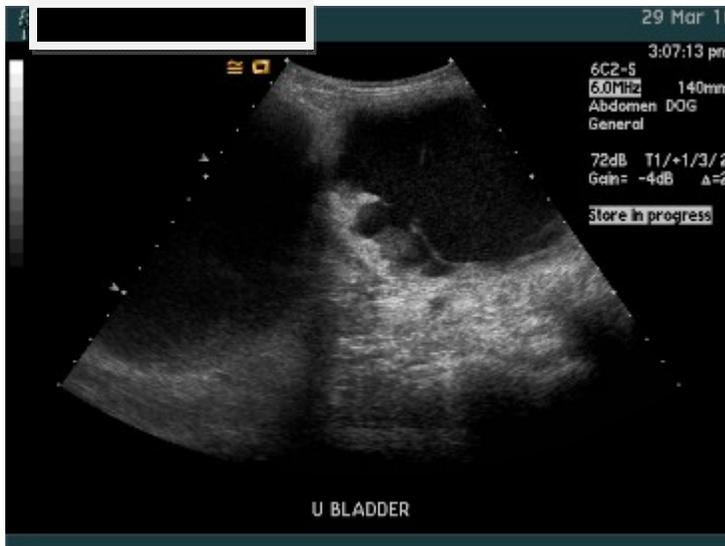
- Complete Blood Count & Blood Chemistry:
  - Stress Leukogram: Mature Neutrophils 14.8 K/uL (N:3-11.5); Lymphocytes 0.5 K/uL (N:1.5-5); Monocytes 1.3 K/uL (N:0.1-0.8)
  - Hyperglycemia: 118 mg/dL (N:73-113)
  - Azotemia: BUN 50mg/dL (N:9-33); Creatinine 2.3 mg/dL (N:0.5-1.5)
  - Hyponatremia: 144 mmol/L (N:147-154)
- Urinalysis (by catheterization)
  - Specific Gravity: 1.009
  - pH: 6.0
  - Protein: 2+
  - Heme: 3+
  - WBC >100 & clumps /hpf
  - Bacteria: Many bacilli
  - Crystals: few unidentified
  - Epithelial cells: 1-10 large rounds with clumps

## Recommended Abdominal Radiographs



- Abdominal Radiographs
  - Round, well-defined metallic shot in the right caudal thorax.
  - Decreased peritoneal detail.
  - Two rounded soft tissue opacities in the caudal abdomen that have well defined cranial margins. Largest one is right and cranially located measuring at least 14 cm in length. The smaller one is left and cranially located measuring at least 10 cm in length.
  - Cranial displacement of small intestines and dorsal elevation of distal descending colon by both soft tissue opacities.
    - Impressions:
      - One of the caudal masses is likely a displaced urinary bladder
      - Second mass most likely prostatic in origin; Differential Diagnosis: cyst, abscess, neoplasia, and granuloma
      - Mild peritoneal effusion
      - Metallic shot

## Recommended Abdominal Ultrasound



- Abdominal Ultrasound
  - Mild amount of anechoic peritoneal effusion
  - Very large ovoid shaped fluid filled cystic structure seen in the caudal abdomen arising from the dorsal aspect of the prostate.
  - Margin of the prostate where the cystic structure arises is irregularly margined and poorly defined. The structure has echogenic fluid contents with mild lobular and linear hyperechoic material that moves with patient movement.
  - Urinary bladder is greatly distended and larger in size than the prostatic cystic mass. It has gravity dependent and suspended debris that swirl with agitation.
  - Mild right pelvic dilation
    - Impressions:
      - Prostatic Cyst
      - Debris within urinary bladder consistent with cellular material, mucus, proteinaceous material
      - Small volume peritoneal effusion, rule out septic abdomen
      - Mild right pyelectasia, rule out diuresis or inflammation

## Treatments:

- Centesis of prostatic cyst
  - Approximately 500 mLs of serosanguinous fluid removed.
  - Following fluid removal cyst was significantly decreased in size.
  - Cytologic examination of fluid
    - Moderate nucleated cellularity, many erythrocytes, and pale pink granular background. Nucleated cells consist of moderately degenerate neutrophils and foamy macrophages. No organisms or cells with features of malignancy found.
    - Opinion: Neutrophilic inflammation of unknown cause
- Enrofloxacin 136 mg tablets: Give 2 tablets by mouth every 24 hours
- Cephalexin 500 mg capsules: Give 1 tablet by mouth every 8 hours.

## Outcome:

- Surgical exploration and cyst resection and omentalization was recommended but declined by owner at this time.
- Urinary tract infection to be treated with antibiotics.
- Castration site infection to be treated with antibiotics and heal by second intention. To wear Elizabethan collar at all times.

## Discussion:

Prostatic cysts develop from remnants of the müllerian duct or as a direct result of the tremendous enlargement of an existing cyst (prostatic retention cyst). In the former situation the rest of the prostatic gland is essentially normal, whereas in the latter situation, cystic benign hyperplasia usually exists. Often the origin of the cyst is obscure. Paraprostatic cysts are located outside the prostatic parenchyma but are attached to the gland by a stalk or adhesions. These cysts can become extremely large and cause signs, including tenesmus, stemming from mechanical interference with abdominal viscera.

Treatment of choice is surgical excision of the cyst and castration. In situations where the cyst cannot be completely excised, omentalization is recommended. If this fails to resolve the problem, marsupialization could be performed. Marsupialization is considered a poor alternative to extirpation and to omentalization because it is not curative in and of itself, and the permanent fistula may become infected.

## References

R. Nelson & C Couto, *Small Animal Internal Medicine*; 2003, 3<sup>rd</sup> edition, pg 932.