

Prostatic Diseases

Extended Version

Classic case: 9-year-old intact male Doberman with tenesmus, weakness, stiff gait, dysuria

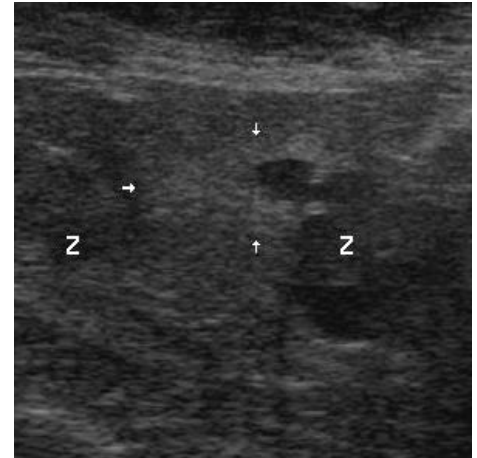
Presentation:

- Most dogs present around 8 years old (tumors about 10 and up)
- **Doberman pinschers** have higher incidence of all prostatic diseases
- Usually intact males (however, castrated males can equally have prostatic neoplasia)
- **All prostatic diseases:**
Tenesmus, dysuria, preputial (urethral) discharge, prostatomegaly
- **Squamous metaplasia:**
Testicular mass with atrophy of contralateral testis, alopecia, pigmentation, gynecomastia, pendulous prepuce and scrotum, pale mucous membranes
- **Prostatitis/prostatic abscess:**
 - Acute – younger intact male dogs with systemic illness, lethargy, anorexia, weakness, stiff gait, fever, tense abdomen
 - Chronic – usually older males with benign prostatic hyperplasia (BPH); recurrent UTI, preputial discharge, tenesmus, dysuria

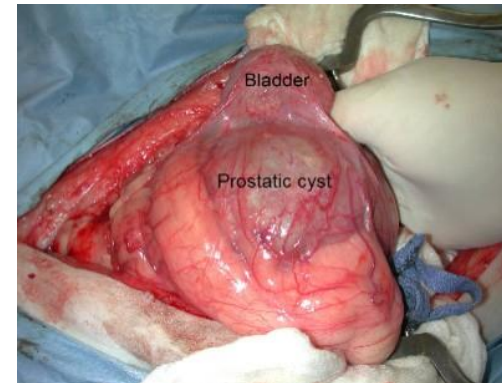
DDX: lower urinary tract dz, colonic disease, mass of other tissue origin

Test(s) of choice:

- CBC – bone marrow suppression (squamous metaplasia only)
- Urinalysis and culture – hematuria
- **Digital rectal palpation**
 - BPH – enlarged, nonpainful, symmetric
 - Paraprostatic cysts – enlarged, fluctuant, nonpainful, asymmetric
 - Prostatic abscess – enlarged, fluctuant, painful, asymmetric
 - Prostatic neoplasia – normal size or enlarged, asymmetric, nodular, firm, nonmovable
 - Squamous metaplasia – nonpainful, symmetric
- **Ultrasonography**
 - BPH – symmetric prostatomegaly with a smooth capsule and homogenous mixed echotexture of the parenchyma. A few small cysts (<10mm) are okay.
 - Paraprostatic cysts – very large and may mimic the urinary bladder
 - Prostatitis – focal or diffuse heterogenous echogenicity, prostatomegaly, cystic changes
 - Will aid in fine needle aspiration of prostate



*Ultrasonography of prostatic neoplasia (arrows) with cysts (z).
Image courtesy, Dr. Kalumet*



*Intraoperative view of prostatic cyst.
Image courtesy, Vet Surgery Central*

Prostatic Diseases

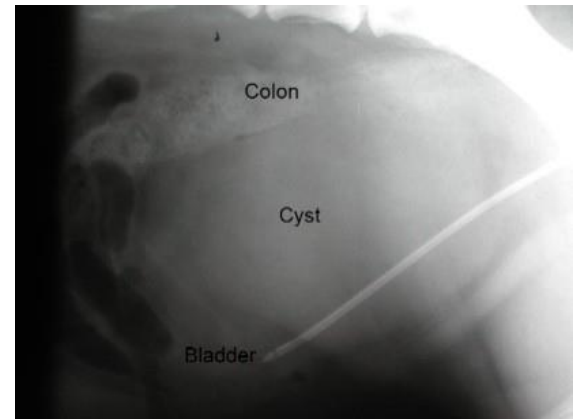
Extended Version

Test(s) of choice: (continued)

- Abdominal radiography
 - Prostatomegaly, dorsal displacement of colon and/or urinary bladder.
 - May have mineralization with neoplasia, especially in castrated dogs
- Retrograde cystourethrogram – clearly differentiates urinary bladder from paraprostatic cyst
- Prostate cytology via prostatic wash
- Prostatic fluid culture – *E coli* is most common organism isolated from prostate abscesses
- Biopsy and histopathology
- Brucella canis testing – screen with card or rapid slide agglutination test or IFA or TAT;
 - False positives are common, negatives are reliable unless dog infected less than 2 mos
 - AGID to confirm positives

Rx of choice:

- BPH
 - Castration – prostatic size will decrease by 50% in 3 weeks and by 70% in 9 weeks
 - Finasteride for valuable breeding dogs (5 α -reductase inhibitor – prevents conversion of testosterone to dihydrotestosterone)
 - Progestins – less effective alternative to castration
- Prostatic cyst
 - Drain or excise cyst, castrate
 - If paraprostatic cyst cannot be removed it should be **omentalized** or marsupialized
 - **Omentalization**: Suture a portion of greater omentum into cyst. Promotes tissue adhesion, angiogenesis, hemostasis, lymphatic drainage.
- Prostatic abscess
 - Drain cavities greater than 1 cm on ultrasound (ultrasound guidance or surgery with omentalization), antibiotics, finasteride with or without castration, no breeding during therapy
- Prostatitis
 - Antibiotics
- Prostatic neoplasia
 - Palliative because of poor prognosis – usually with NSAIDs
- Squamous metaplasia – remove source of estrogen (castration if Sertoli cell tumor)
- Expect urinary incontinence if prostatectomy performed



Radiograph of paraprostatic cyst causing dorsal displacement of the colon and ventral displacement of the urinary bladder. A urinary catheter is in place in the urethra and bladder. Image courtesy, Vet Surgery Central

Prostatic Diseases

Extended Version

Prognosis:

- BPH and intraprostatic cysts – excellent with castration
- Prostatitis – fair
- Prostatic abscess – guarded to poor
- Prostatic neoplasms – poor, they are invasive and advanced at time of diagnosis

Prevention:

- Castrate juvenile dogs

Pearls:

- Most intact geriatric male dogs have BPH
- Castrated male dogs presenting with prostatic disease are at high risk for neoplasia
 - Prostatic carcinomas are most common tumor
 - Originate from ductal/urothelial tissue,
 - Nonandrogen sensitive
- **Prostatitis can occasionally be caused by *Brucella canis*,**
 - **A zoonotic concern**
 - Reportable
- Prostatic disease in **ferrets** occurs more often in middle-aged (3-4 yr) to older *castrated* ferrets
 - Early castration
 - Correlates with adrenocortical disease
 - Which is associated with the development of sterile prostatic cysts
 - Treatment is surgical adrenalectomy
 - or
 - Synthetic gonadotropin releasing hormone agonists (leuprolide, goserelin, deslorelin)
 - Abscesses are treated with antibiotics, adrenalectomy, and omentalization

Refs: Côté, Clinical Veterinary Advisor, 2nd ed, pp 919-926; Quesenberry and Carpenter, Ferrets, Rabbits, and Rodents, 3rd ed, pp 51-54; Fossum's Small Animal Surgery, 3rd ed, pp 747-757; and Merck Manual, 10th ed (online): Overview of Prostatic Diseases, Benign Prostatic Hyperplasia in Small Animals, Prostatitis in Small Animals, Prostatic and Paraprostatic Cysts in Small Animals, Neoplasms of the Prostate in Small Animals

My Notes: