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 abcess – 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
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 (5α-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 **omentialized** or marsupialized
    - **Omentialized**: 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 omentialization), 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
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
      - Synthetic gonadotropin releasing hormone agonists
        (leuprolide, goserelin, deslorelin)
  - Abscesses are treated with antibiotics, adrenalectomy, and omentalization


My Notes: