**Acute Blindness in a Dog**

**Etiologies**

1. **Systemic hypertension causing retinal detachment**
   a. Causes
      i. Acute or chronic renal failure
      ii. Protein-losing nephropathy
      iii. Pheochromocytoma
      iv. Hyperadrenocorticism
      v. Functional thyroid tumor
      vi. Polycythemia vera
      vii. Diabetes mellitus
      viii. Idiopathic
      ix. Obesity (uncommon cause)
      x. Hypothyroidism (uncommon)
      xi. Medications (phenylpropanolamine)

2. **Optic neuritis**

3. **Sudden acute retinal degeneration syndrome**

4. **Other ophthalmic pathology**
   a. Anterior lens luxation
   b. Uveitis
   c. Glaucoma

**Recommended Diagnostics**

- Medication history
- Identify any pu/pd and/or polyphagia, panting, change in behavior, etc.
- Arterial blood pressure
- PCV/TP
- Urine dipstick, urine specific gravity and Azostick
- SNAP 4Dx
- Blood smear to evaluate red cells, white cells, and platelets
- Thorough ophthalmic exam, including pupil dilatation and fundic exam
- LDDS test if suspect hyperadrenocorticism
- If suspect pheochromocytoma, measure urinary metanephrine and normetanephrine levels
- Cytology of any skin lesions and/or enlarged spleen
- Urine histo/blasto antigen to Mira Vista labs
- Cytology of lymph nodes

**Recommended Treatments**

- Systemic hypertension (systolic >150 mmHg) – treat with ACE inhibitor such as enalapril or benazepril first then a calcium-channel blocker such as amlodipine if hypertension does not resolve with ACE inhibitor
- If severe hypertension (systolic >180 mmHg) or evidence of hypertensive encephalopathy or retinopathy, consider oral hydralazine but monitor closely for hypotension (ideally in hospital).
  * Sighthounds BP normally runs about 10-20 mmHg higher
- Other considerations:
  * Pain medication
  * For polycythemia vera: phlebotomy (10 ml/kg-20 ml/kg of blood volume), hydroxyurea
  * Remember normal Greyhounds and dachshunds may have a PCV in the low to mid 60%.
  * Treat other ophthalmic pathology appropriately
    d. Anterior lens luxation
    e. Uveitis
    f. Glaucoma
    g. Sudden acute retinal degeneration syndrome diagnostics: ruling out other causes, fundic exam; may be pu/pd and be similar to hyperadrenocorticism in many ways; no treatment (they are non-painfully blind)
  * For optic neuritis, causes are systemic inflammation/infection/neoplasia/idiopathic
    a. Distemper: anti-diarrheals, broad-spectrum antibiotics, diazepam, IV fluids, isolation
    b. Cryptococcus: fluconazole or itraconazola, amphotericin-B, Terbinafine
    c. Blastomycosis: fluconazole or itraconazole, supportive care, oxygen therapy
    d. Neoplasia: due to monetary constraints, supportive care and potential euthanasia when quality of life declines
    e. Rickettsial diseases: doxycycline
    f. Protozoal diseases: clindamycin and TMS
*If/when infectious diseases are ruled out, try systemic steroid course at 0.5-1 mg/kg/day. Give a course of doxycycline and clindamycin then steroids if no improvement if budget if limited to such*