**Otitis media / Otitis interna**

**Extended Version**

**Classic case:** 2 year old cat with **right head tilt, circling to the right**, ataxia

**Presentation:** Common in small animals, calves, lambs, kids, crias (baby camelid), and pigs

- **Unilateral**
  - Asymmetric ataxia
  - Head tilt toward lesion
  - **Horizontal nystagmus** (fast phase AWAY from lesion)
  - Falling toward lesion
  - Head shaking
  - Scratching at neck and ears
  - Auditory impairment (difficulty localizing sounds)
  - ± **Ipsilateral Horner’s syndrome** (small animals only)
    - Miosis, ptosis, enophthalmos
    - Sympathetic branch passes through middle ear
  - ± **Ipsilateral facial nerve paralysis**
    - Ear droop, lip droop, absent palpebral reflex
    - Facial nerve passes adjacent to inner/middle ear
  - ± Pain on opening the mouth or reluctance to eat

- **Bilateral**
  - Seen most often in cats
  - **Wide head excursions**
  - May or may not have nystagmus
    - bilateral lesions cancel each other out unless one side worse than the other
  - Crouched to ground

**DDX:**
Temporal bone or brainstem neoplasia, metronidazole toxicity, idiopathic vestibular disease, granulomatous meningoencephalitis or other encephalitis, vascular accident, syringomyelia, listeriosis (ruminants)

**Test(s) of choice:**

- **Otoscopic exam** – may require sedation or anesthesia
  - Otitis externa
  - Tympanic membrane intact
  - Bulging tympanic membrane
  - Opaque or thickened tympanic membrane

- **Advanced imaging** (CT or MRI)

- **Myringotomy**
  - Histopathology or cytology
  - Culture and sensitivity
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Rx of choice:
- **Long-term antibiotics**
  - 2 months
  - Based on culture and sensitivity
- **Myringotomy** – tiny incision in the eardrum
  - Relieve pressure from excessive fluid build-up, or to drain pus from the middle ear.
  - **Gently** flush middle ear cavity w/ sterile saline
  - Done at same time of diagnostic myringotomy
- **Ventral bulla osteotomy**
  - especially if CNS involvement
- **Lateral bullectomy** if severe, chronic external auditory canal disease
  - Total external auditory canal ablation (TECA)
- ± **Anti-motion sickness** – diphenhydramine, dimenhydrinate, diazepam, meclizine
- ± **Artificial tears** – if neurogenic KCS is present secondary to facial nerve paralysis

Prognosis:
- Good in calves if early treatment
- Poor in pigs if CNS involved
- Guarded in dogs and cats if chronic – the more chronic, the more guarded prognosis
- Hearing loss and head tilt may be permanent

Pearls:
- Horner’s syndrome **not** associated with otitis media/interna in large animals
- Extension of necrotizing otitis interna through internal acoustic meatus occurs easily in pig, goat, calf
- **Most common cause of peripheral vestibular disease in dog and cat**
- Etiology
  - Extension of otitis externa across tympanic membrane
  - From nasopharynx via Eustachian tube
  - Hematogenous
- Most common causes in dogs and cats
  - Fungal - *Malassezia pachydermatis*
  - Nasopharyngeal polyp (cats)
  - Foreign bodies
- **Cavalier King Charles Spaniels** –
  - Noninfectious otitis called **primary secretory otitis media (PSOM)**
  - Also called “glue ear”
  - Viscous mucus plug in middle ear cavity

*Photo by Galleytrotter*
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My Notes: