

Otitis media / Otitis interna

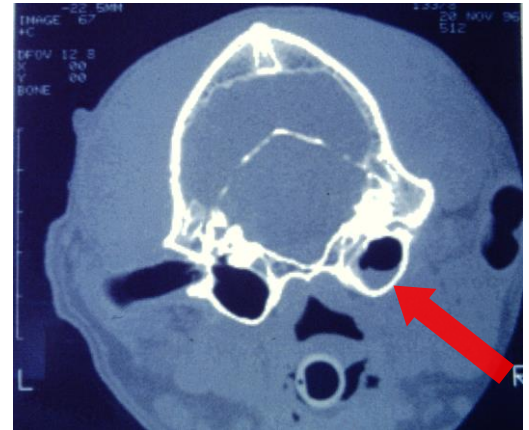
Extended Version

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



CT scan showing fluid density in right tympanic bulla of a dog. Note the soft tissue density of the external ear canal.

Image courtesy Dr. Shirley Scott

- **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)
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- ± **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
 - Bacterial - *Staphylococcus* spp, *Streptococcus* spp, *Pseudomonas* spp, *Proteus* spp
 - 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



Cavalier King Charles Spaniels can get a noninfectious otitis called primary secretory otitis media (PSOM).

Photo by Galleytrotter



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Refs: A Practical Guide to Canine and Feline Neurology, Dewey, 2nd ed. p 273-274, Veterinary Neuroanatomy and Clinical Neurology, de Lahunta and Glass, 3rd ed. p 329-336, Small Animal Neurology, Jaggy. p 376-378, Large Animal Neurology, Mayhew, 2nd ed. p235-237 and Merck Manual, 10th ed (online): Otitis media and interna

My Notes: