History and clinical signs of otitis media

It is uncommon for a patient to be presented to the veterinarian with a history of acute otitis media. Iatrogenic rupture of the eardrum during ear cleaning can lead to an inflammatory acute otitis media, however. A foreign that has become lodged in the ear canal can also cause acute otitis media. For example, plant awns and foxtails often work their way through the eardrum and cause a considerable bacterial infection and inflammatory reaction in the ear canal.

More commonly, a dog with otitis media has a history of recurrent or chronic bacterial external ear infections. The mucous membrane lining the tympanic bulla reacts to foreign substances (eg, infectious organisms, hair, cells, cerumen from the external ear canal, chemicals and pharmaceutics used in the external canal) by producing a purulent exudate and increasing secretion of protective mucus from activated goblet cells. Dogs and cats with otitis media with an open eardrum often have a copious is common to see copious mucoid exudates along the floor of the horizontal canal. Although this material is usually in liquid form, the mucus and pus may be inspissated and dry. Mucus is not produced anywhere along the external ear, but it oozes from the tympanic bulla into the horizontal canal through any rent in the TM. The presence of mucus means that there is a hole in the eardrum. Some patients produce so much exudate that it overflows onto the periaural region of the face, or in a dog with pendulous ears, there may be dried exudate on the ear flap adjacent to the external opening of the auditory canal. Head shaking to relieve the pain and tickle associated with liquid exudate is common in otitis media. It may be wise to check for otitis media in cases of aural hematoma.

Pain on palpation of the base of the ear canal or pain on manipulation of the pinna should also alert the clinician to otitis media. Some dogs even bite their owners while the owners are trying to administer medication because of the intense pain. Patients with otitis media may also be reluctant to have their mouth opened, and there may be a history of reluctance to chew hard food. This is a result of inflammation, swelling, and pain within the bulla, which is located adjacent to the temporomandibular joint. When otitis media affects the nerves that course around the base of the ear or through the tympanic bulla, the patient may show something as subtle as keratoconjunctivitis sicca on the ipsilateral side. This results from damage to the palpebral branch of the facial nerve. When otitis media affects the sympathetic nerves from the facial and trigeminal nerves coursing through the middle ear, the patient may show mild signs of Horner’s syndrome (enophthalmos, ptosis, and miosis). Some patients may show pain; head tilt; or, with facial nerve palsy, a drooped lip, drooped ear, or loss of the ability to close the eyelid, leading to exposure keratitis . Because the facial nerve courses in and around the ear canal, it is easily affected by swelling, inflammation, and trauma from the dog scratching at the base of the ear. Facial neuropathy should be suspected if there is drooping of the facial muscles and skin or drooling saliva, because the lips and facial muscles cannot create an oral seal. Peripheral vestibular disease with and circling may be evident if the infection and inflammation have affected the inner ear.

An owner may present a patient for a hearing deficit. These cases should be evaluated for otitis media. Fluid in the middle ear dampens hearing. If this fluid is the result of previous flushing, it is usually absorbed within 7 to 10 days and the patient regains the hearing. When the eardrum is ruptured or when the ossicles of the middle ear have sclerosed, air conduction hearing is reduced. High-pitched sound waves cannot be effectively transmitted from the ear canal to the cochlea. If a tumor or a polyp has filled the middle ear, air conduction hearing is eliminated. Bone conduction hearing is usually still present in these patients, and the pet can only hear the lower range of tones (bone conduction hearing can be demonstrated by placing your fingers in your ears and listening to the sounds around you). If there is hearing loss detected, this is usually as a result of bilateral ear disease. Unilateral hearing loss is difficult to assess in animals.

If there is pharyngeal drainage of mucus and exudates resulting from otitis media, the patient may be presented for inspiratory stridor. In these cases, a pharyngeal examination may reveal a nasopharyngeal polyp interfering with breathing or thick mucus draining from the auditory ostium in the nasopharynx covering the caudal pharynx and occluding the airway.