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Ear & Nose Disease

Secretory Otitis Media in King Charles Spaniels

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Etiopathogenesis
Primary Secretory Otitis Media or PSOM is an uncommon disease of unknown etiopathogenesis which predominantly affects Cavalier King Charles Spaniels.\textsuperscript{1,2} So far, there is no evidence that infection is part of the pathogenesis. Current hypotheses regarding the cause of the disease include obstruction or dysfunction of the Eustachian tube with decreased drainage of the mucus from the middle ear and increased production of viscous mucus caused by inflammatory, hypersensitivity or allergic reactions of the middle ear and Eustachian tube mucosa.\textsuperscript{1,2}

Symptoms
Clinical signs associated with PSOM include signs of head and/or neck pain with episodes of spontaneous yelping or crying, signs of otitis externa (with or without otoscopic evidence of otitis externa) and impaired hearing.\textsuperscript{1,2} Signs are very similar to, and probably overlap those of, cervical disk disease and inflammatory ear or central nervous system disease including syringomyelia. In addition, many animals show pharyngeal signs with stridorous breathing (snoring) and sometimes dysphagia.

Diagnosis
A thorough and complete clinical examination is mandatory for correct diagnosis and therapy. It should include a general physical, dermatologic, neurologic (cranial nerves) and otoscopic examination with either a handheld otoscope or using video-otoscopy.\textsuperscript{3} For complete visualization of the tympanic membrane and prior to therapy, ear flushing is necessary.\textsuperscript{3} Video otoscopy has many advantages over handheld otoscopy, the most important ones being the higher degree of magnification and a more intense light source that is positioned at the tip of the endoscope. Abnormalities of the tympanic membrane, like increased opacity and hyperemia in case of otitis media, and small tears can more easily be identified using this technique. Findings on otoscopy in dogs with PSOM range from completely normal ear canals to ear canals with narrowing of the horizontal parts or slight diffuse thickening of the skin lining the ear canals and ceruminous otitis externa. In most affected ears, a bulging, opaque but intact tympanic membrane can be seen (pars flaccida). Diagnostic imaging (CT-scan, MRI) is mandatory for proper evaluation of the middle ear, treatment planning and for exclusion of other differential diagnoses. The extent and type of hearing impairment should be examined with electrophysiological methods like brainstem-evoked response audiometry.\textsuperscript{4} A definitive diagnosis can be achieved following myringotomy; typically a highly viscous, opaque mucus effusion is removed from the tympanic bulla. Culture of this mucus is negative in most cases.
Therapy

Treatment recommendations for PSOM include manual removal of the mucoid effusion from the tympanic cavity through a myringotomy incision (with or without assistance of an operating microscope), administration of topical or systemic corticosteroids, systemic antibiotics, mucolytics, topical antibiotics, and placement of tympanostomy tubes.1,2 Myringotomy ( tympanotomy) is a surgical incision of the tympanic membrane used to gain access to the middle ear for draining fluid (for culture and cytology), relieving pressure, and / or instilling medication.3 Three types of myringotomy have been described using either a curvilinear incision, a radial incision or by performing a paracentesis.4 All incisions should be made in the caudoventral portions of the pars tensa in order to stay away as far as possible from the middle ear ossicles and round and oval windows. While the curvilinear and radial incisions are safer to perform, allow for more adequate visualisation of the middle ear cavity and thorough flushing of heavy exsudate, they are quite difficult to perform in dogs. In most cases of middle ear effusion in dogs, the pars flaccida stretches and bulges into the ear canal and covers most of the pars tensa, making it impossible to visualize the exact location of incision. Paracentesis is therefore preferred by the author and involves the use of a stab incision with special-purpose needles, spear-point knives, swabs, tomcat catheters or small Frazier suction tubes. This can be performed under videoscopic guidance or blindly depending on the space available in the ear canal. The tomcat catheter and Frazier suction tubes both allow for flushing and aspiration of 1 ml of sterile saline into the middle ear cavity. This fluid can then be cultured and cytologically evaluated. Multiple myringotomies usually have to be performed before long term resolutions of clinical signs is obtained.1,2 A recent report indicates that tympanostomy tubes provide continual tympanic cavity ventilation and drainage and are an acceptable alternative to repeated myringotomy.2

References


