Otoscopic, Cytological, and Microbiological Examination of the Equine External Ear Canal

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Otoscopic examination and cytology of the equine ear would be beneficial in diseases such as head trauma, head shaking, otitis externa secondary to otitis media, vestibular disease, aural neoplasia, and aural pruritus secondary to parasites. In practice, otic examinations of horses are rarely performed because of the perceived difficulty in visualizing the equine external ear canal and tympanic membrane as well as the need for chemical restraint. In this study, the proximal external ear canal was examined in live horses using handheld otoscopy and in cadaver heads using video otoscopy. Visualization of the proximal ear canal of the sedated horse could be done with a handheld otoscope, but more sedation or general anesthesia and a video otoscope or endoscope would be required to adequately image the tympanic membrane in the live horse. Cytology and aerobic cultures from the proximal ear canals of 18 horses were performed.

In three horses, both ears were sampled. Cytology from 11 of 21 ears was negative for cells and organisms, and cultures from 9 of 21 ears were sterile. Cultures from 12 of 21 ears showed growth; 10 of 21 ears had mixed cultures containing low numbers of organisms (Corynebacterium sp. being most common), and 2 of 21 had heavy growth of a single organism (Corynebacterium sp. and Staphylococcus intermedius). Cross-sectional imaging using computed tomography (CT) and histopathology of equine cadaver heads was also performed to allow for further understanding of the anatomy of the equine external ear canal. Equine practitioners should be aware that otic examination is possible and may provide important diagnostic information.1

Reference