

TITLE: RETROSPECTIVE STUDY OF ETIOLOGY AND ANTIBIOTIC SENSITIVITY OF MICROBIAL AGENTS ASSOCIATED WITH EXTERNAL OTITIS IN DOGS

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ABSTRACT:

Among the otopathies, external otitis represents about 76.7% of the cases. *Staphylococcus* sp., *Streptococcus* sp., *Proteus* sp., *Pseudomonas aeruginosa* and the yeast *Malassezia* sp. are the most common agents found in cultures of otological exudate. Once otitis is a multi-etiological and multifactorial disease, culture and antibiogram are extremely important to identify the involved agents and avoid indiscriminate use of antibiotics in the veterinary routine. Thus, the aim of this study was to identify the most prevalent etiological agents and evaluate the effectiveness of antibiotics used for otitis treatment, whether chronic or not, by means of a retrospective study conducted from 117 reports of samples collected from dogs with suspected external otitis and sent for mycological, bacteriological and antibiogram tests at Uningá Veterinary Microbiology Laboratory, during 2016 and 2017. In 30 (25.6%) of the 117 reports analyzed it was possible to isolate only one microbial agent. In the other 87 (74.4%), two or more agents were isolated, characterizing mixed infections. The most common etiologic agents found were *Staphylococcus* sp. (63.3%), and *Malassezia* sp. (16.6%), both opportunistic pathogens part of the normal skin microbiota. Among the antibiotics tested, the aminoglycosides tobramycin (84.7%), gentamicin (75.4%) and neomycin (66.2%) were the most effective. On the other hand, the microorganisms showed higher resistance to clindamycin (69.2%), cefalexin (64.3%), and tetracycline (58.3%). The use of antibiotics without the prior realization of sensitivity tests may be related to bacterial resistance. Additionally, since the main isolated microorganisms are skin commensal, predisposing factors can favor their proliferation. Thus, it was concluded that the early diagnosis of external otitis cases and the performance of antibiogram tests are extremely important for the establishment of proper control and treatment, avoiding the chronicity of some cases and/or resistance to certain antibiotics.

Keywords: antibiogram, antibiotic sensibility, *Malassezia* sp., otitis, *Staphylococcus* sp..