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Bacterial and Fungal Otitis: A Prospective Clinical Study from FMV Iași

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Otitis represents one of the most common disorders encountered in veterinary clinical practice, affecting both dogs and cats and often resulting from complex bacterial or fungal infections. Due to its multifactorial etiology and potential for recurrence, understanding the pathogens involved and the associated risk factors is essential for effective management and prevention. The aim of this prospective study was to evaluate the incidence, clinical characteristics, and predisposing factors of bacterial and fungal otitis diagnosed in patients from the Clinical Hospital of the Faculty of Veterinary Medicine, Iași. The study included both canine and feline patients presenting clinical signs of otitis, who were subsequently confirmed with bacterial and/or fungal infections of the external auditory canal. A combination of clinical and laboratory diagnostic methods was employed, including otoscopic examination, microbiological culture, and antimicrobial susceptibility testing. The results indicated a higher prevalence of bacterial infections, primarily caused by *Staphylococcus pseudintermedius* and *Pseudomonas aeruginosa*, along with fungal infections mainly due to *Malassezia pachydermatis* and *Candida spp.* Several risk factors were identified, such as poor ear hygiene, allergic reactions, chronic dermatological disorders, and the presence of foreign bodies. Additionally, a link between recurrent otitis and prior antimicrobial therapy was observed, suggesting the emergence of resistant strains. This study enhances the current understanding of the prevalence and clinical management of bacterial and fungal otitis in veterinary patients and underscores the importance of accurate diagnosis and appropriate therapeutic strategies in clinical settings.

• Introduction

Histologically, in otitis externa we see glandular hyperplasia, glandular dilatation, epithelial hyperplasia, and hyperkeratosis. These changes typically result in increased cerumen production along the external ear canal, which contributes to increased local humidity and pH of the external ear canal, thus predisposing the ear to secondary infections. Microorganisms belonging to the normal microbial flora of the auricular area can become pathogenic when environmental and/or primary conditions determine faster expression of their virulence factors.

• Material and method

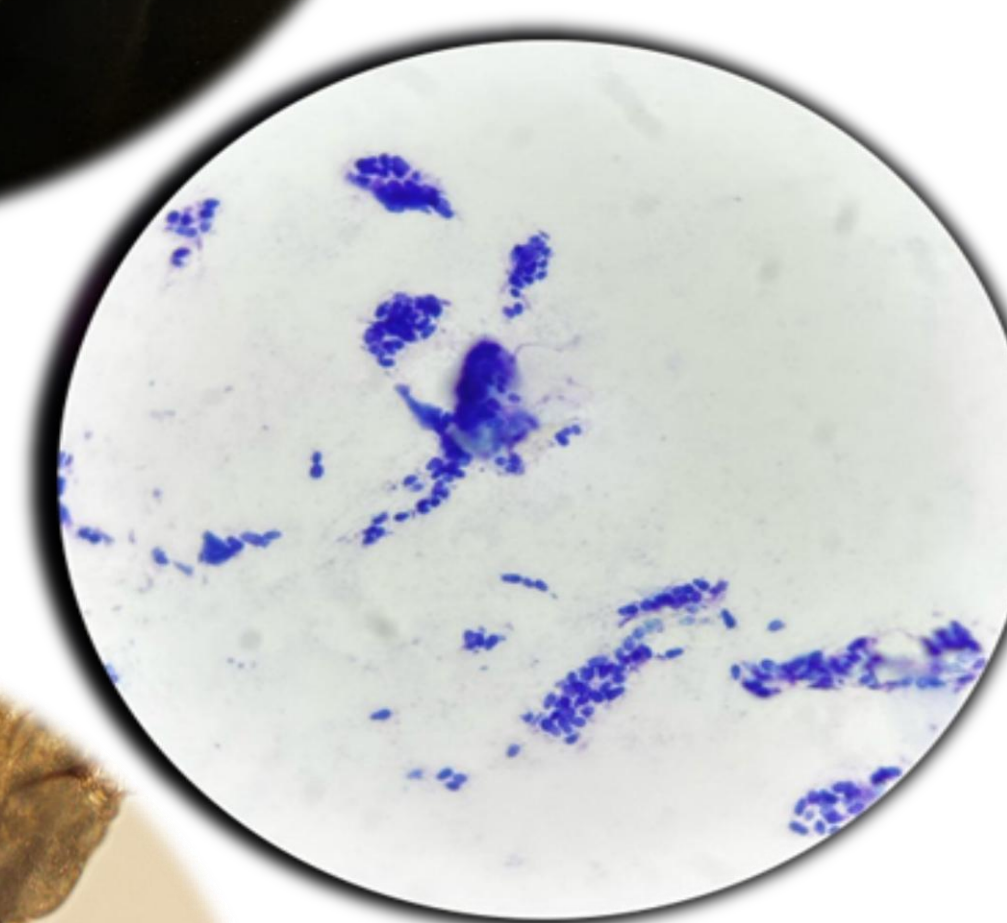
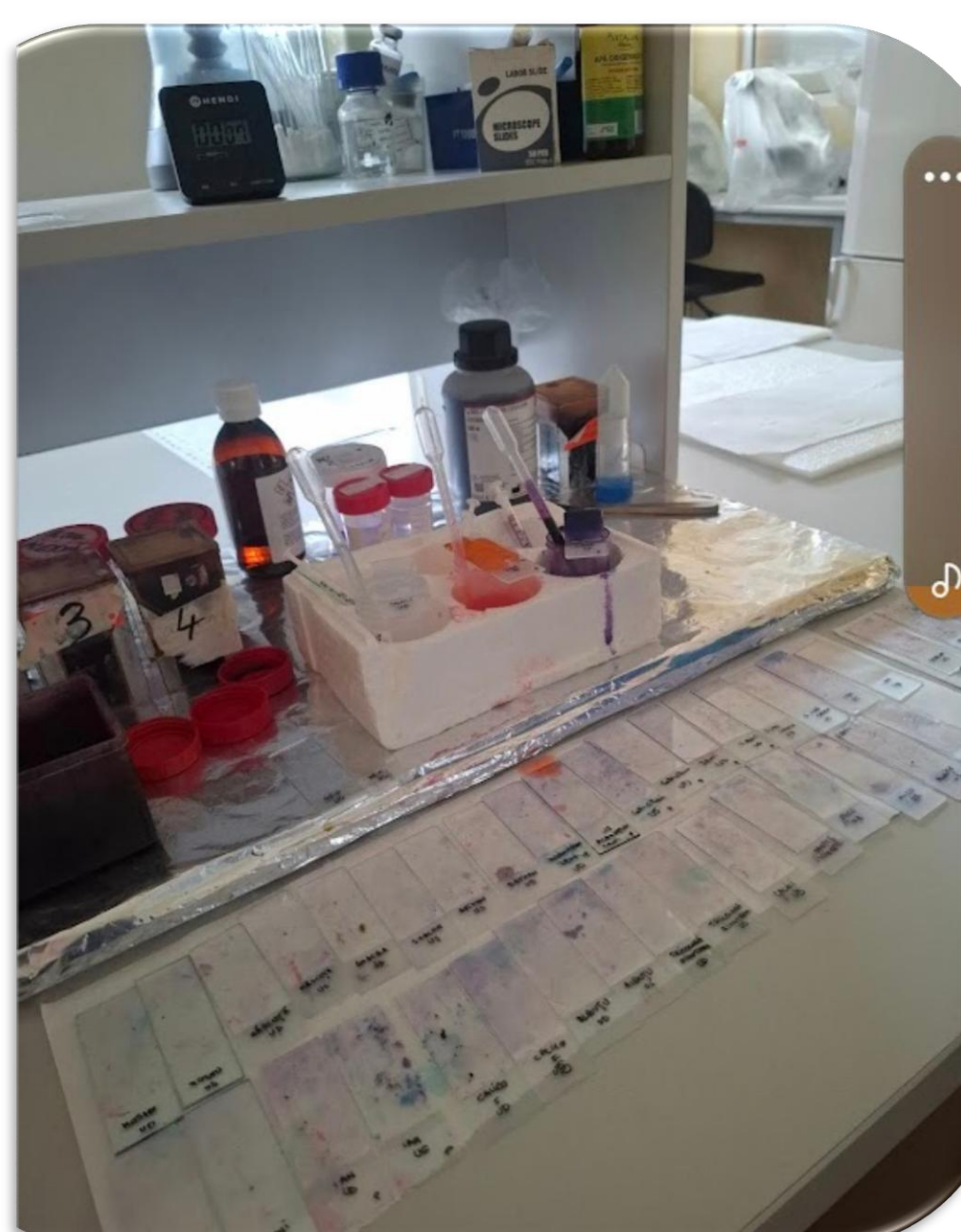
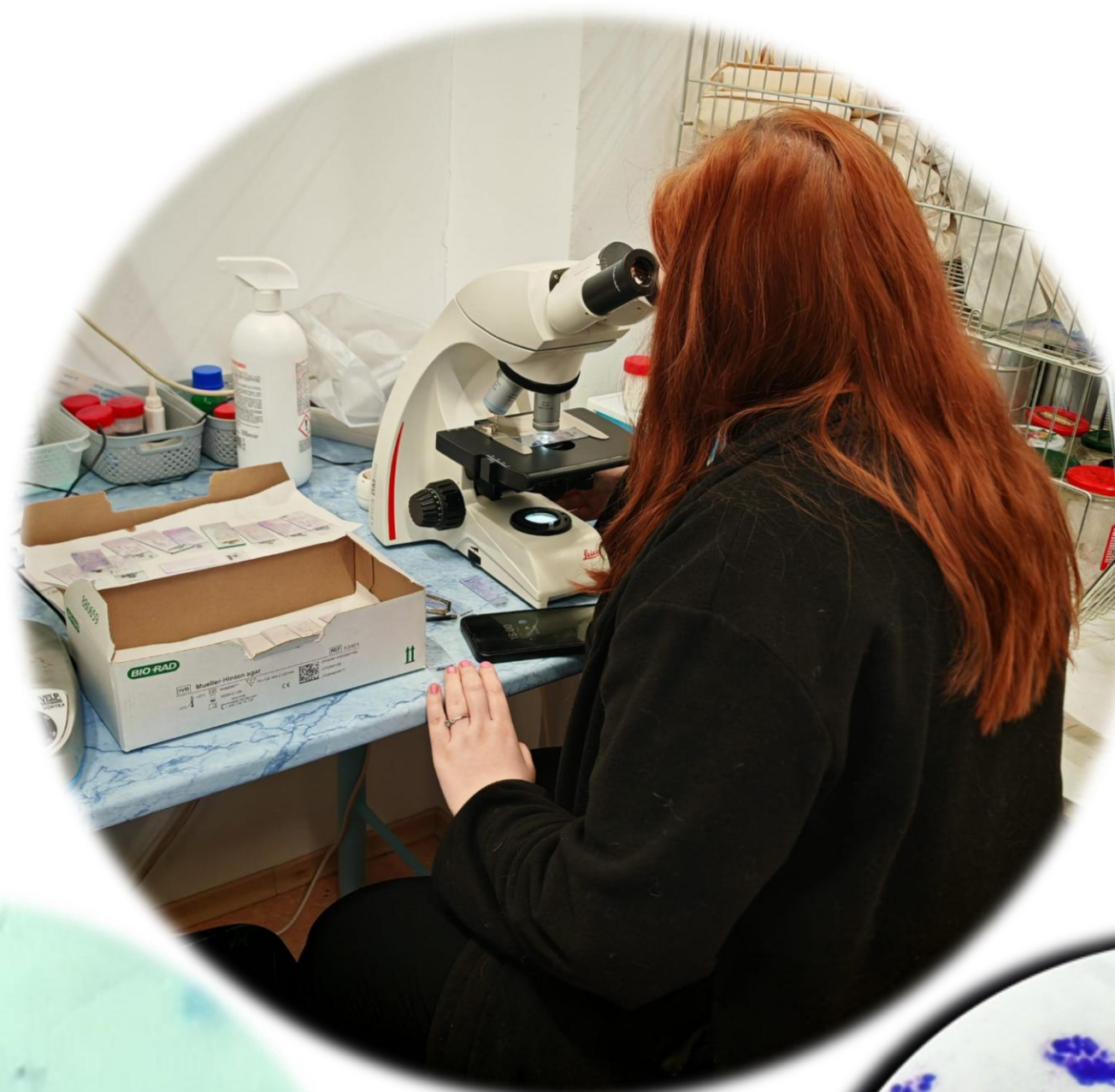
To obtain ear cytology, the cotton swab is inserted into the ear canal, no further than the vertical canal. The swabs are then rolled onto two slide, and ears are labeled. The sterile swab should be maintained at refrigeration temperature and the cytology should be performed as quickly as possible. The sample will be stained with Diff-Quik and examined at high power looking for bacteria and yeasts.

• Results and discussions

In the present study, the most frequently identified bacteria were *S. pseudintermedius*, *P. aeruginosa* and *P. mirabilis*. Both Gram-positive and Gram-negative bacteria showed high resistance to amoxicillin/clavulanate and kanamycin, therefore they are not recommended as initial empirical therapy for the treatment of otitis media.

• Conclusions

The aim of this study was to evaluate the presence of microorganisms involved in otitis externa in dogs and cats within the Faculty of Veterinary Medicine of Iași in order to update the data and investigate the presence of multidrug-resistant bacterial strains.



Acknowledgement: This study enhanced the current understanding of the prevalence and clinical management of bacterial and fungal otitis in veterinary patients and underscored the importance of accurate diagnosis and appropriate therapeutic strategies in clinical settings.