



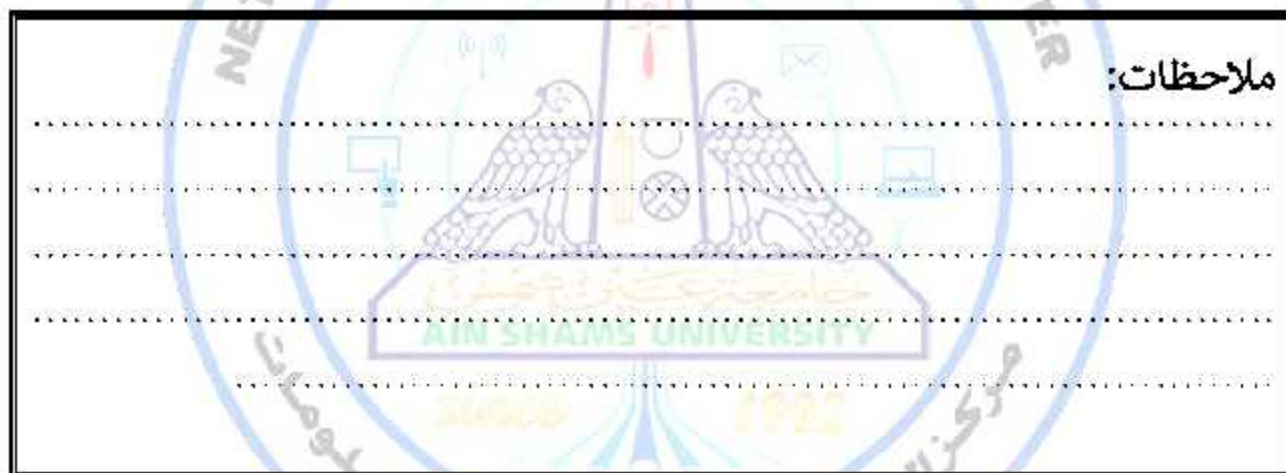
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تم رفع هذه الرسالة بواسطة / سنوي محمود عقل

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

ملاحظات:





Cairo University



Microbiological characterization and antibacterial susceptibility of the bacterial pathogens recovered from cats with ophthalmic diseases

A thesis Presented by

Yasmine Mahmoud Abdelaziz Elmenshawy

(BVSc, Cairo University, 2016)

**For Master's degree in veterinary sciences (BVSc)
(Bacteriology, Immunology and Mycology)**

Under Supervision of

Prof. Dr. Ahmed Samir
Professor of Microbiology
Faculty of Veterinary Medicine
Cairo University

Dr. Khaled Mohamed Ali
Assistant Professor of Surgery,
Anesthesiology and Radiology
Faculty of Veterinary
Medicine Cairo University

2021

Cairo University

Faculty of Veterinary Medicine

Department of Microbiology

Approval sheet

The examining committee approved Miss Yasmine Mahmoud Abdelaziz Elmenshawhy for the Master degree in Veterinary Medical Sciences (M. V. Sc.in Microbiology) from Cairo University.

Prof. Dr. Ashraf Awad Abdeltwab

Professor and Head, Department of Microbiology

Faculty of Veterinary Medicine

Benha University

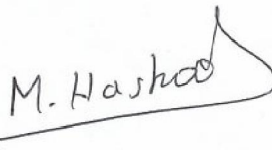


Prof. Dr. Mahmoud Elsayed Gameel Hashad

Professor and Head, Department of Microbiology

Faculty of Veterinary Medicine

Cairo University



Prof. Dr. Ahmed Samir Mohammed

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

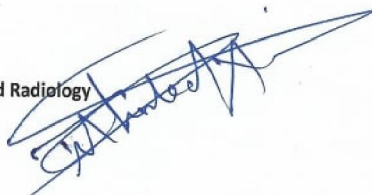


Dr. Khaled Mohammed Ali

Assistant Professor of Surgery, Anesthesiology and Radiology

Faculty of Veterinary Medicine

Cairo University





Cairo University



Supervision Sheet

This thesis is under supervision of:

Prof. Dr. Ahmed Samir Mohamed

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

Dr. Khaled Mohamed Ali

Assistant Professor of Surgery, Anesthesiology and Radiology

Faculty of Veterinary Medicine

Cairo University

2021



Cairo University



Name: Yasmine Mahmoud Abdelaziz Elmenshawy

Nationality: Egyptian

Date of birth: 28/5/1994

Place of birth: UAE

Specialization: Microbiology

Place of birth: UAE

Thesis title:

Microbiological characterization and antibacterial susceptibility of the bacterial pathogens recovered from cats with ophthalmic diseases

Abstract

Main eye infections are typically concerned with corneal, conjunctival, and eyelid diseases, either mono-or poly-microbial infections. This study was carried out to identify bacterial isolates and their antibiotic sensitivity pattern in cats with ophthalmic diseases. A total of 78 samples were collected from 64 cats of different ages and both sexes, who had various ophthalmic problems. Samples were collected at the time of initial presentation, during follow up, and after complete recovery. The study revealed that 73 (93.5%) samples were positive among the examined samples. Both Gram-positive and Gram-negative bacteria were involved in ocular infections, yet Gram-positive bacteria were more prominent. *Corynebacterium* spp. (n=27), *Staphylococcus aureus* (n=15), *Staphylococcus epidermidis* (n=10), *Streptococcus pyogenes* (n=6), *Enterococcus faecalis* (n=4), *E. coli* (n=8), *Citrobacter freundii* (n=1) and *Pseudomonas* spp. (n=2) were isolated from infected cases. Multi-drug resistant isolates were numerous, with MRSA and ESβLs present in most of the isolates. 12 strains of *S. aureus* were MRSAs, 6 strains of *S. epidermidis* were MRSEs, 7 strains of family *Enterobacteriaceae* were ESβLs. Finally, 52% of the recovered isolates were multi-drug resistant (MDR) strains. Selection of specific antibacterial therapy according to laboratory confirmation of susceptibility patterns should be implemented rapidly and efficiently.

Keywords: bacteria, cat, eye, MDR, MRSA, ESβLs.

Dedication

*This thesis is dedicated to my mother, **Saadia Abdelaal**, spirit of my dear father, my sister and my brother. Without their endless love and support I would have never been able to complete my graduate studies.*

Acknowledgement

I would like to express my sincere thanks to Prof. Dr. Ahmed Samir, professor of Microbiology, Faculty of Veterinary Medicine, Cairo University for his supervision and invaluable constant support and constructive comments throughout the experimental and thesis work. I cannot express my heartfelt gratitude for his involvement, support, patience and enthusiasm.

I owe a large debt of gratitude to Dr. Khaled Ali, Ass. Professor of Surgery, Anesthesiology and Radiology Faculty of Veterinary Medicine Cairo University, for not only inspiring the project on which this study is based, but also for all I have gained over the years from his wide knowledge, wisdom, experience, and stimulating ideas.

Furthermore, thanks to all staff members of the department of Microbiology, department of Surgery, Anesthesiology and Radiology, Faculty of Veterinary Medicine, Cairo University and all workers in the Veterinary Ophthalmology Clinic in Sheikh Zayed city for their help and support to finish this work.

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