



**UNIVERSITY OF TRIPOLI ALAHLIA
DEPARTMENT OF MEDICAL LABORATORIES**

PROJECT TITLE

**PREVALENCE OF BACTERIAL VAGINOSIS AND THEIR
ANTIMICROBIAL RESISTANCE PATTERN OF
BACTERIA AMONG PATIENT WITH GENITAL TRACT
INFECTION**

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ANTIMICROBIAL RESISTANCE PATTERN OF
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INFECTION**

BY

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A project submitted in fulfilment of the requirement for the
degree of Bachelor of Medical Laboratories

Department of Medical Laboratories
University Tripoli of Alahlia

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ABSTRACT

Background: Bacterial vaginosis is a worldwide issue due to the raised risk of acquisition of sexually transmitted infections. The aim of the study is to assess the incidence of bacterial vaginosis and their antimicrobial pattern in women attending al-usra private clinic in Tripoli, Libya. **Methods.** A cross-sectional study was conducted among 102 women between Jan to May 2019. Gram-stained vaginal swabs were examined microscopically, characterized by colony morphology, and their antimicrobial susceptibility pattern was determined. **Results:** The overall prevalence of bacterial vaginosis was 41%. Of 42 bacterial isolates, 76.1% were gram-positive and 23.8% were gram-negative bacteria. The overall drug resistance level of gram-positive bacteria was high against penicillin, co-amoxiclav, and amoxicillin. Vancomycin and imipenem were the most active drugs against Gram-positive bacteria. The overall drug resistance level of gram-negative bacteria was high against co-amoxiclav. Ceftriaxone, cefotaxime, and amikacin were the most active drugs against Gram-negative bacteria. **Conclusions.** The prevalence of bacterial vaginosis was high. Routine culture of vaginal samples should be performed on patients with vaginitis and the drug susceptibility pattern of each isolate should be determined.

Keywords: Bacterial Vaginosis – Resistance – Antimicrobial – Libya.

الملخص

مقدمة: يعتبر الالتهاب المهبلي البكتيري مشكلة عالمية بسبب زيادة خطر الإصابة بالأمراض المنقولة عن طريق الاتصال الجنسي. الهدف من هذه الدراسة هو تقييم نسبة حدوث الالتهاب المهبل الجرثومي ونمط المضاد الحيوي المقاوم للميكروبات لدى النساء في عيادة الأسرة الخاصة في ليبيا. **طرق البحث.** أجريت دراسة مستعرضة بين 102 امرأة في الفترة من يناير إلى مايو 2019. تم فحص مسحات المهبل التي تحتوي الميكروبات عن طريق استخدام المجهر، وفحص مستعمرات البكتيريا، وتم تحديد نمط الحساسية المضادة للميكروبات بهم. **النتائج:** كان معدل انتشار التهاب المهبل الجرثومي الإجمالي 41%. من 42 عزلة بكتيرية، 76.1% كانت إيجابية الجرام و 23.8% كانت البكتيريا سلبية الجرام. كان مستوى مقاومة الدواء الكلي للبكتيريا إيجابية الجرام مرتفعاً ضد البنسلين، الأموكسيسلاف، والأموكسيسيلين. كان فانكومايسين واميبيم أكثر الأدوية نشاطاً ضد البكتيريا إيجابية الجرام. كان مستوى المقاومة الكلية للأدوية في البكتيريا سالبة الجرام مرتفعاً ضد كواموكسكلاف. كان السيفترياكسون، السيفوتاكسيم، والأميكاسين أكثر الأدوية فاعلية ضد البكتيريا سالبة الجرام. **الاستنتاجات.** كان معدل انتشار التهاب المهبل الجرثومي مرتفعاً. يجب إجراء الاستزراع الروتيني للعينات المهبلية على مرضى التهاب المهبل ويجب تحديد نمط الحساسية للعقار لكل عزلة.

الكلمات المفتاحية: التهاب المهبل الجرثومي - مقاومة - مضادات الميكروبات - ليبيا.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a project for the degree of Bachelor of Medical Laboratories.

.....
Ahmed Elbadri Atia
Supervisor

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a project for the degree of Bachelor of Medical Laboratories.

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Mohammed Mohi Abdo
Examiner

This project was submitted to the Department of Medical Laboratories and is accepted as partial fulfilment of the requirements for the degree of Bachelor of Medical Laboratories.

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Mohammed Mohi Abdo
Head, Department of Medical
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This Project was submitted to the department of Medical Laboratories and is acceptable as partial fulfillment of the requirements for the degree of Bachelor of Medical Laboratories.

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DEDICATION

*I am very grateful to **ALLAH ALMIGHTY** for without His graces and blessings, this study would not have been possible.*

I am greatly indebted to many people who have played different roles that enabled me to bring this work to its present form.

I would also like to acknowledge University of Tripoli Alahlia for supporting this study.

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