

**PREVALENCE OF FEMALE UROGENITAL TRACT INFECTIONS IN ADO-  
ODO/OTA, OGUN STATE**

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**(17PCQ01715)**

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**BY**

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN  
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER  
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BIOLOGICAL SCIENCES, COLLEGE OF SCIENCE AND TECHNOLOGY,  
COVENANT UNIVERSITY.**

**FEBRUARY, 2020**

## ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of the degree of Master of Science in Microbiology in the Department of Biological Sciences, College of Science and Technology, Covenant University, Ota, Nigeria

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## **DECLARATION**

I, **OGUNRINOLA, GRACE AYOOLUWA (17PCQ01715)** declares that this research work was carried out by me under the supervision of Dr. Grace I. Olasehinde of the Department of Biological Sciences, College of Science and Technology, Covenant University, Ota, Nigeria. I attest that the dissertation has not been presented either wholly or partially for the award of any degree elsewhere. All sources of data and scholarly information used in this dissertation are duly acknowledged.

**OGUNRINOLA, GRACE AYOOLUWA**

**Signature and Date**

## **CERTIFICATION**

We certify that this dissertation titled “**PREVALENCE OF FEMALE UROGENITAL TRACT INFECTIONS IN ADO-ODO/OTA, OGUN STATE** is an original research work carried out by **OGUNRINOLA, GRACE AYOO LUWA (17PCQ01715)** in the Department of Biological Sciences, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria under the supervision of Dr. Grace I. Olasehinde. We have examined and found this work acceptable as part of the requirements for the award of Master of Science in Microbiology.

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## **DEDICATION**

I dedicate this work to God Almighty for His faithfulness, loving kindness and sufficient grace towards me and throughout this research work.

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## ABSTRACT

Urinary tract infections (UTI) represent one of the most frequent reasons for hospital outpatient visits. Over 1 million women worldwide experience an episode of acute Pelvic Inflammatory Disease (PID) each year with higher prevalence recorded amongst teenagers and first-time mothers. This study assessed the prevalence of urogenital tract infections among symptomatic and asymptomatic females, in Ado-Odo Ota Local Government Area of Ogun State. Ethical approval was obtained from Covenant University Health Research and Ethics Committee. A total of 120 consenting females 13 years and above were recruited into this study. Midstream urine and high vaginal swabs (HVS) were collected alongside demographic information and medical history using structured questionnaires. Obtained samples were analysed using standard microbiological techniques. Antibiotic susceptibility pattern of obtained isolates was assessed using disc diffusion method. Plasmid profiling of multidrug-resistant isolates was carried out. The overall prevalence of UTI in this study was 66.9% with the symptomatic participants accounting for the highest prevalence (77.67%) as compared with the asymptomatic participants (56.7%). A total of 145 isolates were obtained from urine and high vaginal swab collected. *Escherichia coli* was the most frequently isolated organism from both urine (54%) and high vaginal swabs (20%) samples. Antibiotic resistance among the Gram-negative isolates was highest to Ampicillin (76.31%) and Augumentin (64.75%) and lowest to Nitofurantion (9.48%), Ciprofloxacin (15.36%) and Gentamicin (24.51%). Gram-positive isolates showed higher resistance to Cloxacillin (100%), Ceftazidime (87.5) and Gentamicin (87%). Plasmid profiling revealed that the antibiotic resistance seen in 11.2% of the isolates were plasmid-borne. Conjugation analysis also revealed that these isolates were capable of transferring plasmids via conjugation. This study has shown that there is a high prevalence of urogenital tract infection and antimicrobial-resistant pathogens in the study area. Findings from this study necessitate awareness and interventions towards antibiotic stewardship in a bid to prevent the spread of multidrug resistant species.

**Keywords:** Urogenital Tract Infections, Symptomatic, Asymptomatic, Antimicrobial resistance, Plasmids