

**TITLE PAGE**

**A CASE STUDY OF TINEA PEDIS, AMONG NIGERIAN  
SOLDIERS IN ENUGU STATE**

**BY**

**IWORAH EMMANUEL I.  
(MB/2008/384)**

**A RESEARCH PROJECT (MCB 429) SUBMITTED TO  
THE DEPARTMENT OF MICROBIOLOGY AND  
BIOTECHNOLOGY**

**FACULTY OF NATURAL SCIENCES  
CARITAS UNIVERSITY AMORJI-NIKE, ENUGU STATE.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT  
FOR THE AWRAD OF BACHELOR OF SCIENCE (B.SC)  
DEGREE IN MICROBIOLOGY AND BIOTECHNOLOGY.**

**AUGUST, 2012.**

## **CERTIFICATION PAGE**

I certify that this research was carried out by Iworah Emmanuel I. (MB/2008/384) in the department of Microbiology and Biotechnology, faculty of Natural Science, Caritas University Amorji-Nike, Enugu.

The department recognized that Iworah Emmanuel I. (MB/2008/384) bears full responsibility for this work.

.....  
**IWORAH EMMANUEL I.**  
**STUDENT**

.....  
**DATE**

.....  
**PROF. BRYAN OGENEH**  
**SUPERVISOR**

.....  
**DATE**

.....  
**DR. NMEMA E.E**  
**HOD**

.....  
**DATE**

.....  
**EXTERNAL SUPERVISOR**

.....  
**DATE**

## **DEDICATION**

Dedicated to the Almighty God and His Mother the Blessed Virgin Mary for their guidance throughout this project.

## **ACKNOWLEDGEMENT**

In full gratitude and appreciation, it is said that behind every success comes hard work. Great men they say are backed up by great beings. My work is a testimony of many hands which led to the completion of this work.

Salute goes to my most worthy supervisor, Prof. Bryan Ogeneh who is the dynamite behind this project.

I also appreciate my H.O.D Dr. Nmema who stood by my side in seeing this work to the best of it and other lecturer for their support in my academic pursuit; Mrs. Ezeme A.C (project coordinator), Miss Patricia Okwuobi, Dr. Orji, Mr. Amadi, Dr Nwaziri, I appreciate.

I want to give credit to my dear family who contributed to the success of this work, My parents: Hon. & Mrs. Nwachukwu Iworah, My brothers: Micheal, josemaria, and Judemary Iworah.

Recognition goes to my dear Uncle who made effort in the fulfillment of this work; Prof. Chike Anibeze and his family and my other Uncles. I thank you all.

I want to thank a dear friend Umeozulu Frances and her family, I will forever remain grateful to you.

To my friends, all my departmental, my roommates who have in one way or the other helped me, thank you all and God bless.

## TABLE OF CONTENT

Title page - - - - -	i
Certification - - - - -	ii
Dedication - - - - -	iii
Acknowledgement - - - - -	iv
Table of content - - - - -	v
Abstract - - - - -	vi

### CHAPTER ONE

1.1 Introduction - - - - -	1
1.2 Definition - - - - -	5
1.3 Epidermiology - - - - -	5
1.4 Clinical Manifestations-	6
1.5 Prognosis and therapy-	7
1.6 Histopathology - - - - -	8
1.7 Mycology (principal dermatophytoses)-	8
1.8 Natural Habitat - - - - -	8
1.9 Interdigital <i>Tinea pedis</i> - - - - -	10
1.10 Chronic Hyperkeratosis <i>Tinea pedis</i> -	10
1.11 Inflammatory/vesicular <i>Tinea pedis</i> -	11
1.12 Ulcerative <i>Tinea pedis</i> - - - - -	12
1.13 Aims and Objective - - - - -	14

### CHAPTER TWO

2.1 Background - - - - -	15
2.2 Pathophysiology - - - - -	16
2.3 Epidemiology - - - - -	17

<b>2.4</b> Symptoms	-	-	-	-	-	-	-	-	18
<b>2.5</b> Prognosis	-	-	-	-	-	-	-	-	20
<b>2.6</b> Test	-	-	-	-	-	-	-	-	21
<b>2.7</b> Treatment	-	-	-	-	-	-	-	-	23
<b>2.8</b> Histological findings	-	-	-	-	-	-	-	-	24
 <b>CHAPTER THREE</b>									
<b>3.1</b> Materials	-	-	-	-	-	-	-	-	25
<b>3.2</b> Specimen collection	-	-	-	-	-	-	-	-	25
<b>3.3</b> Microscopic Examination	-	-	-	-	-	-	-	-	25
 <b>CHAPTER FOUR</b>									
<b>4.1</b> Result	-	-	-	-	-	-	-	-	27
 <b>CHAPTER FIVE</b>									
<b>5.1</b> Discussion	-	-	-	-	-	-	-	-	29
<b>5.2</b> Recommendation	-	-	-	-	-	-	-	-	30
<b>5.3</b> Conclusion	-	-	-	-	-	-	-	-	33
<b>REFERENCE</b>	-	-	-	-	-	-	-	-	35
<b>APPENDIX</b>	-	-	-	-	-	-	-	-	37

## ABSTRACT

*Tinea pedis*, a fungal infection of the feet, especially within the toe webs and soles was studied using 40 soldiers (20men and 20women) as a case study. This infection is related to footwear having been considered to be a new dermatophytoses. The soldiers have the toe webs and soles cleaned with alcohol or sterile water and the lesions scrapped with sterile scalpel and placed between two glass slides with a drop of 10-20% KOH and then viewed under microscope. Branched hyphae and arthroconidia formation showed the presence of *Tinea pedis*. The result showed that 10men(25%) only were afflicted while the women were free. It is believed that more continuance wearing of shoes were a risk factor.