

**CORELATION OF SECONDARY INFECTION WITH
PERIPHERAL LEVEL T LYMPHOCYTE WITH CD4
MARKER (CD4) COUNT IN HIV/AIDS PATIENTS**

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By

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.....

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ABSTRACT

This study was conducted in order to determine the local isolate infecting PLWHA with different level of peripheral T-cell with CD4 marker concentration and to correlate them. For this purpose, 21 individual participated from Maiti Nepal's clinic. Out of 126 samples from 5 different regions of 21 patients 71 were positive for different organisms including virus.

Total patients were classified into three categories according to their level of CD4 cell count expressed in cells per mm³. The first category which comprises those individual with CD4 cell count above 500 includes 33.33% of total population, followed by second category where CD4 cell count is between 500-200 includes 57.17% of total population, and the third category where CD4 cell count is below 200 comprises 9.53% of total population.

56.34% of total positive samples were from second category, 35.21% from first, and 8.45% from third. In third category, 66.67% of the group populations were positive for different organisms, 59.52% were positive from first category, and from second category only 56.34% were positive. Death of subjects occurs during the study periods which reduce the total population by 3.17%. Most of the infected individuals from all categories were suffering from multiple infections. From total positive samples, 84.51% were bacterial infection, 9.86% were infection due to protozoa, 4.23% were fungi infection, and 1.41% was viral infection.

Entamoeba histolytica, *Candia albicans*, *Nocardia* sps. and Hepatitis B virus were only isolated from the population of 1st category. *Campylobacter jejuni*, *Giardia lamblia*, and *Salmonella paratyphi* occurred in second category only. None of the isolates were only present in third category. The most predominant isolates as a whole were *Staphylococcus aureus* 12.67% and *Streptococcus pneumoniae* 12.67% of the total organism isolated. *Salmonella paratyphi*, *Entamoeba histolytica*, *Nocardia* sps. and Hepatitis B virus were the least occurred organism comprising 1.40% each of the total population.

It was found that the secondary infection occurred during HIV infection was due to opportunistic organisms and most of the patients suffer during the time when their CD4 cell count drop down to below 500 cells per mm³. People who died due to HIV/AIDS found to be suffered from multiple infections.

LIST OF ABBREVIATIONS

| | |
|-------|--|
| µl | - micro liter |
| ARV | - AIDS Associated Retrovirus |
| AFB | - Acid Fast Bacilli |
| ARC | - AIDS Related Complex |
| ART | - Anti Retroviral Therapy |
| AZT | - Zidovudine |
| BA | -Blood agar |
| BHI | - Brain Heart Infusion |
| BMI | -Body Mass Index |
| CA | -Chocolate agar |
| CD | -Cluster of differentiation |
| CDC | - Centers for Disease Control and prevention |
| CMV | - Cytomegalovirus |
| CSW | - Commercial Sex Workers |
| CTLs | - Cytotoxic T Lymphocytes |
| ELISA | - Enzyme Linked Immunosorbent Assay |
| ESR | - Erythrocytes Sedimentation Rate |
| gp | - glycoprotein |
| HAART | - Highly Active Antiretroviral Therapy |
| Hb | - Haemoglobin |
| HBV | - Hepatitis B Virus |
| HIV | -Human immunodeficiency virus |
| HTLV | - Human T-Lymphocytes Virus |
| Ig | - Immunoglobulin |
| KS | - Kaposi's sarcoma |
| LAV | - Lymphadenopathy Associated Virus |

| | |
|-------|---|
| LTRs | - Long Terminal Repeats |
| MA | -Mac Conkey agar |
| MAC | - <i>Mycobacterium avium</i> Complex |
| MDR | - Multi-drugs Resistant |
| MMWR | - Morbidity and Mortality Weekly Report |
| MR VP | -Methyl Red Voges Proskauer |
| NA | -Nutrient agar |
| NCASC | -National center for AIDS and STD control |
| PCP | - <i>Pneumonitis carinii</i> Pneumonia |
| PCR | - Polymerase Chain Reaction |
| PGL | - Persistent Generalized Lymphadenopathy |
| PLWHA | -People living with HIV AIDS |
| RBC | - Red Blood Cell |
| RPR | - Rapid Plasma Regain |
| RTI | -Respiratory tract infection |
| STD | -Sexually Transmitted Disease |
| TCR | - T-cell Receptor |
| WBC | - White Blood Cell |
| WHO | - World Health Organization |

TABLE OF CONTENTS

| | Page No. |
|--|-----------------|
| Title page | i |
| Recommendation | ii |
| Certificate of approval | iii |
| Boards of examiners | iv |
| Acknowledgement | v |
| Abstract | vi |
| List of abbreviations | viii |
| Table of contents | ix |
| List of tables | xiii |
| List of figures | xiv |
| List of photographs | xv |
| List of appendices | xvi |
| CHAPTER I | |
| 1. INTRODUCTION | 1-5 |
| CHAPTER II | |
| 2. OBJECTIVES | 6 |
| CHAPTER III | |
| 3. LITERATURE REVIEW | 7-54 |
| 3.1 Immunodeficiency disease | 7 |
| 3.2 Cells of immune system | 8 |
| 3.2.1 B Lymphocyte | 8 |
| 3.2.2 T Lymphocyte | 9 |
| 3.3 Acquired immunodeficiency syndrome | 9 |
| 3.4 HIV and immunodeficiency | 12 |
| 3.5 Clinical manifestations of HIV infection | 13 |

| | | |
|-------------------|---|-------|
| 3.6 | HIV and its pathogenicity | 16 |
| 3.6.1 | General properties of retroviridae | 16 |
| 3.6.2 | Morphology of HIV | 16 |
| 3.6.3 | Genomic organization of HIV | 17 |
| 3.6.4 | Replication strategy of HIV | 19 |
| 3.6.5 | Pathogenesis of HIV | 20 |
| 3.7 | HIV/AIDS and opportunistic infection | 21 |
| 3.7.1 | Abnormalities in cell mediated immunity | 22 |
| 3.7.2 | Abnormalities humoral immunity | 23 |
| 3.7.3 | Source of opportunistic pathogens | 23 |
| 3.7.4 | Common opportunistic pathogens | 24 |
| | 3.7.4.1 Bacteria | 25 |
| | 3.7.4.2 Fungi | 33 |
| | 3.7.4.3 Protozoa | 34 |
| | 3.7.4.4 Virus | 36 |
| 3.8 | HIV/AIDS related systematic diseases | 38 |
| 3.8.1 | HIV/AIDS and respiratory disease | 38 |
| 3.8.2 | HIV/AIDS and gastrointestinal disease | 41 |
| 3.8.3 | HIV/AIDS and hematological disease | 43 |
| 3.8.4 | HIV/AIDS and urinary tract infection | 44 |
| 3.9 | Mode of HIV transmission | 45 |
| 3.10 | Laboratory diagnosis of HIV infection | 47 |
| 3.10.1 | WHO testing strategy for HIV infection | 47 |
| 3.10.2 | Microbiological investigations of HIV infection | 48 |
| 3.11 | Treating HIV/AIDS | 49 |
| 3.11.1 | Antiretroviral therapy for HIV/AIDS | 49 |
| 3.11.2 | Immune-based therapy for HIV/AIDS | 52 |
| 3.11.3 | Treating secondary infections in HIV/AIDS | 53 |
| CHAPTER IV | | |
| 4. | MATERIALS AND METHODS | 55-69 |

| | | |
|---|-------|----|
| Materials | 55 | |
| 4.1.1 Equipments and glassware | 55 | |
| 4.1.2 Chemicals and reagents | 56 | |
| 4.1.3 Media | 56 | |
| Methodology | 56 | |
| Site selection | 56 | |
| Study population | | 57 |
| Sample population | 57 | |
| Sample size | 57 | |
| Time frame | 58 | |
| Methods | 58 | |
| Study type | 58 | |
| Data analysis | 58 | |
| 4.3 Collection and processing | 59 | |
| 4.3.1 Blood sample | 60 | |
| 4.3.1.1 Differential white blood cell count | 61 | |
| 4.3.1.2 Haemoglobin concentration | 61 | |
| 4.3.1.3 Erythrocyte sedimentation rate | 61 | |
| 4.3.1.4 Staining | 62 | |
| 4.3.1.5 Serological test | 63 | |
| 4.3.1.6 Culture | 63 | |
| 4.3.2 Throat swab sample | 64 | |
| 4.3.3 Sputum sample | 65 | |
| 4.3.4 Stool sample | 66 | |
| 4.3.5 Urine sample | 67 | |
| 4.4 Quality control | 68 | |
| CHAPTER V | | |
| 5. RESULTS | 70-82 | |
| CHAPTER VI | | |
| 6. DISCUSSION | 83-92 | |

| | |
|--------------------------------|-----------|
| CHAPTER VII | |
| 7. SUMMARY AND RECOMMENDATIONS | 93-96 |
| REFERENCES | 97-113 |
| APPENDICES I-VI | i- xxxiii |

LIST OF TABLES

| | Page No. | |
|----------|--|----|
| Table 1 | CDC classification of HIV infections | 15 |
| Table 2 | Source of opportunistic pathogens | 24 |
| Table 3 | Pulmonary disease in HIV infection | 40 |
| Table 4 | Common pathogens in HIV-related diarrhoea | 43 |
| Table 5 | WHO recommendation for HIV testing strategies according to test objectives and prevalence of infection in the population | 48 |
| Table 6 | Currently available antiretroviral drugs | 51 |
| Table 7 | Equipments used during study | 55 |
| Table 8 | Total cases of HIV infection with relation to T-cell with CD4 marker count | 71 |
| Table 9 | Body mass index with reference to CD4 cells count | 72 |
| Table 10 | Differential WBC count | 72 |
| Table 11 | Haemoglobin concentration and ESR | 73 |
| Table 12 | Organism isolated from blood with relation to CD4 cell count | 74 |
| Table 13 | Organism isolated from throat swab | 75 |
| Table 14 | Organism isolated from sputum | 76 |
| Table 15 | Protozoa isolated from stool sample | 77 |
| Table 16 | Bacteriological examination of stool | 78 |
| Table 17 | Organism isolated from urine | 79 |
| Table 18 | Total organisms isolated in correlation with CD4 cell count | 80 |
| Table 19 | Organism according to CD4 count category | 82 |

LIST OF FIGURES

- Figure 1 Total cases of HIV infection with relation to T-cell with CD4 marker count
- Figure 2 Body mass index with reference to CD4 cells count
- Figure 3 Organisms isolated from blood with relation to CD4 cells count
- Figure 4 Organisms isolated from throat swab with relation to CD4 cells count
- Figure 5 Organism isolated from sputum with relation to CD4 cell count
- Figure 6 Protozoa isolated from stool samples with relation to CD4 cell counts
- Figure 7 Bacteriological examination of stool with relation to CD4 cell counts
- Figure 8 Organisms isolated from urine sample with relation to CD4 cell counts

LIST OF PHOTOGRAPHS

- Photograph 1 Broth culture showing *Staphylococcus aureus* on Brain Heart Infusion broth
- Photograph 2 Gram stain showing *Streptococcus pneumoniae* isolated from blood agar
- Photograph 3 AFB stains showing *Nocardia* sps. Isolated from Nutrient agar
- Photograph 4 Culture plate showing *Haemophilus influenzae* on chocolate agar
- Photograph 5 Culture plate showing *Pseudomonas aeruginosa* on Nutrient agar
- Photograph 6 Modified AFB stain showing *Mycobacterium avium*
- Photograph 7 Culture plate showing *Klebsiella pneumoniae* on Mac-Conkey agar
- Photograph 8 Cy-Flow Counter for counting T cell with CD4 marker from blood.

LIST OF APPENDICES

| | | Page No. |
|---------------|--|----------|
| Appendix I | Questionnaire | |
| | A. Examination of Blood specimen | i |
| | B. Examination of Throat Swab | iii |
| | C. Examination of Sputum | iv |
| | D. Examination of Urine Specimen | v |
| | E. Examination of Stool | vi |
| Appendix II | A. Composition and Preparation of different Culture Media | vii |
| | B. Composition and Preparation of Bio-chemical Media | ix |
| Appendix III | A. Composition and Preparation of Stains and Reagents | xiii |
| | B. Composition and Preparation of Test Reagents | xvii |
| Appendix IV | Methodology of staining | xix |
| Appendix V | Methodology for Bio-Chemical tests | xxiv |
| Appendix VI | Written consent for the active participation during the period of study. | xxix |
| Appendix VII | Internship/Volunteership agreement with Maiti Nepal | xxxii |
| Appendix VIII | Volunteership letter from Maiti Nepal | xxxiii |