

**PREVALENCE OF HIV INFECTION
AMONG LEPROSY PATIENTS ATTENDING
THE NATIONAL TUBERCULOSIS AND
LEPROSY TRAINING CENTRE, ZARIA-
NIGERIA AND ITS AFFILIATED CLINICS.**

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INTRODUCTION

- Leprosy and HIV
 - Common Infections in Nigeria
 - Chronic Infections With Long IP and Clinical Course
 - Associated with Impairment of CMI through:
 - Induction of Cytokine Dysregulation viz:
 - ↓T_H 1 Response → ↓IL-2 and IFN-γ
 - ↑T_H 2 Response → ↑IL-4 and IL 10

INTRODUCTION

- Prevalence in Nigeria:
 - Leprosy 0.5/10,000(WHO 2003 status report)
 - HIV 5%(2003 sentinel Survey)
- Objectives:
 - To determine the prevalence of, and risk factors for HIV infection among leprosy patients.
 - To determine the effect of HIV on the clinical pattern of leprosy and severity of leprosy attributable to HIV specific Immunosuppression.

MATERIALS AND METHODS

- Study sites:-
 - -NTBLC Saye-Zaria
 - -Y. L. H. Bela.
 - -Kawo -1 and Kawo -2 Clinics
 - -Makarfi Leprosy Clinic
 - -Giwa Leprosy Clinic
 - -Hunkuyi Leprosy Clinic

MATERIALS AND METHODS

Study Population

- Clinical Diagnosis of Leprosy (Incident).
- Age ≥ 15yrs
- Unknown HIV Sero-Status
- Informed Consent (after counseling for HIV test)

MATERIALS AND METHODS ASSESSMENT

- Personal Data
 - Age, Sex, Marital Status, Education, Occupation and Address.
- Clinical Assessment
 - Skin and Nerve Lesions:- No., Type, Dist.
- Clinical Classification (WHO Field)
- Risk Factors For HIV Infection:
 - Blood Transfusion
 - Sexual Risk Behavior
 - IVDU
- LABORATORY
 - SSS for AFB (BI)
 - HIV Screening Tests
 - Western Blott
 - (CD4 Count)

RESULTS

Age and Sex Distribution

Age (yrs)	Females		Males		Total	
	No.	%	No.	%	No.	%
15-24	5	3.50	15	10.49	20	13.99
25-34	13	9.09	39	27.27	52	36.36
35-44	16	11.19	16	11.19	32	22.38
45-54	7	4.90	12	8.39	19	13.29
55-64	2	1.40	11	7.69	13	9.09
>65	0	--	7	4.90	7	4.90
Total	43	30.08	100	69.92	143	100

RESULTS

- Clinical Classification:
 - MB- 85 (59.44%)
 - PB- 58(40.56%)
 - Treatment Category.
 - New = 41(28.7%),(26MB,15PB)
 - On Treatment = 97(67.8%),(55MB, 42PB)
 - Relapse = 5(3.5%),(4MB,1PB*)
- *New lesions –ve BI

RESULTS

Bacterial Index	New		On Treatment		Relapse		Total	
	No	%	No	%	No	%	No	%
0	10	11.76	46	54.11	0	--	56	65.88
1+	5	5.88	2	2.35	1	1.18	8	9.41
2+	5	5.88	3	3.53	0	0.00	8	9.41
3+	2	2.35	1	1.18	2	2.35	5	5.88
4+	2	2.35	1	1.18	0	0.00	3	3.53
5+	0	0.00	1	1.18	1	1.18	2	2.35
6+	2	2.35	1	1.18	0	0.00	3	3.53
Total	26	30.59	55	64.71	4	4.71	85	100

RESULTS

Risk Factors For HIV Infection

Risk Factors for HIV infection	Frequency	
	No.	%
Blood Transfusion (BT)	5	3.5
Multiple Sexual Partners (MSP)*	26	18.2
Sexually Transmitted Disease (STD)*	4	2.8
BT + MSP*	1	0.7
MSP* + STD#	6	4.2
Homosexual activity	0	0
Intravenous Drug Use	0	0
No Risk Behavior	101	70.6
Total	143	100

* MSP within polygamous settings (only one EMS, No CSW)

No Hx of GUDs, No Symptomatic STDs

RESULTS

- First Screening Test -Positive: 1/143
- Repeat Screening Test –Negative
- WB –Indeterminate (reactive to only p24 Ag)

CONTROLS

- Blood Donors and ANC Clients
 - Informed Consent (Including HIV test)
 - Absence of History of Leprosy or its treatment
- Positive Repeat HIV Tests -10/143(7%)

DISCUSSION

- Study population Prevalence- 0
- Control 7%
 - p<0.05(fisher exact)
 - OR= 0.00 (95%CI-0.00-0.48)
- Saha et al
- Kawuma et al
- Munyao et al
- Ponnighaus et al

DISCUSSION

- Absence of HIV infection among Study population:
 - Rural Residence of Subjects:-Borgdorf, Awofeso.
 - Identified risk factors for HIV infection.
 - Absence of High risk Factors-
 - GUDs
 - Homosexual activity
 - IVDU –Glasser et al reported absence of IVDU in NY
 - MSP within Polygamous settings may have lower risk than PMS, EMS, CSW -Sekar B in india reported a strong association between HIV infection and High risk behaviour.

DISCUSSION

- Discordant HIV Screening test
 - Preconversion State
 - False Positive HIV test
 - Found in low risk populations
 - Reported in Leprosy Patients-Kashala et al
 - Ag Mimicry
 - Correlation with LAM IgM
- Indeterminate WB
 - Common in low risk populations
 - ShivRaj et al reported HIV-1 Ags in 33/43 leprosy patients with >50% being p24 Ag.
 - Kashala et al also reported same in Leprosy patients with p24 as the commonest Ag.

LIMITATIONS

- Absence of HIV infection in the study population did not allow for determining the effect of HIV on the clinical pattern and severity of leprosy attributable to immunosuppression by HIV infection.

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THANK YOU