



TO STUDY PREVALENCE OF OCULAR MANIFESTATIONS IN NEWLY DIAGNOSED HIV PATIENTS IN RELATION TO CD4 COUNT AT TERTIARY CARE CENTER JLN HOSPITAL AJMER

General Medicine

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ABSTRACT

HIV/AIDS is Acquired Immunodeficiency Syndrome with ocular manifestation is one among its many systemic manifestations. The aim of this study is to assess the ocular manifestation in newly diagnosed HIV seropositive patient and to correlate it with CD4 cell count. **Material and Method:** This cross sectional study was carried out on 100 newly diagnosed HIV seropositive patient with CD4 cell count and routine examination and ocular examination was done in Jawahar Lal Nehru hospital Ajmer. **Result:** 78 out of 100 patients had HIV related ocular manifestations with sexual mode of disease transmission in 74 patients. Majority of patients in this study had multiple ocular manifestations at the time of examination, conjunctival microvasculopathy (45.3%), blepharitis (24.79%) followed by allergic/infective conjunctivitis (5.13%) and other manifestations. 75.85% of ocular manifestations was seen in age group of 20-40 years. The average CD4 count in 44 male patients was found to be 432.32 cells/mm³ and among 34 female patients was 606.09 cells/mm³. **Conclusion:** Disease awareness and prevention programme must be undertaken. This study highlights the need for routine ophthalmological screening of all HIV seropositive patients along with CD4 count.

KEYWORDS

Cd4 cell count, HIV, Ocular manifestations, Seropositive

INTRODUCTION

HIV infection is a problematic communicable disease present in our population affecting commonly reproductive age group. HIV manifests in eye either directly in the form of viral load or causes low immunity there by increasing chances for opportunistic infections. At present the prevalence of HIV infected people in India is 2.1million. 1,2 Eighty percent of the new HIV infections are due to heterosexual transmission and majority occurring in persons aged between 15 to 49 years.1,3 The cumulative life time risk of developing at least one abnormal ocular lesion for a HIV positive person during the course of the disease is found to be between 52 to 100% in various studies. The aim of this study is to assess the ocular manifestation in newly diagnosed HIV seropositive patient and to correlate it with CD4 cell count.

MATERIAL AND METHOD

This cross sectional study was carried out on 100 newly diagnosed HIV seropositive patient with CD4 cell count and routine examination and ocular examination was done in Jawahar Lal Nehru hospital Ajmer. It includes patient of any age group but excludes severely ill and patient with pre existing systemic illness. Informed written consent was taken from the patient before enrolling them into study.

Detailed history with ocular history was taken along with ocular tests like Snellen's chart, slit lamp evaluation, detailed fundus evaluation, neuroophthalmological examination, tonometry, schirmer's dry eye test. Complete systemic and lab work up with serological investigations included TORCH titer, PCR assay for Herpes Zoster virus, Varicella Zoster were done. Other investigations like CT brain/MRI brain was also done where ever required.

Statistical analysis: The cases were recorded in the Performa and statistical analysis was done with the help of SPSS 14.0, mean, percentage and P value was calculated.

RESULTS

78 out of 100 patients had HIV related ocular manifestations with sexual mode of disease transmission in 74 patients. Majority of patients in this study had multiple ocular manifestations at the time of examination, conjunctival microvasculopathy (45.3%), blepharitis (24.79%) followed by allergic/infective conjunctivitis (5.13%) and other manifestations. 75.85% of ocular manifestations was seen in age group of 20-40 years. The average CD4 count in 44 male patients was found to be 432.32 cells/mm³ and among 34 female patients was 606.09 cells/mm³.

Table 1: Shows various ocular findings among HIV seropositive

Ocular Findings Adnexa	Number of Patients with Findings	Percentage
Blepharitis	29	24.79
Molluscum Contagiosum	2	1.71
Stye	2	1.71
Herpes Zoster	1	0.85
Allergic / Infective Conjunctivitis	6	5.13
Conj. Microvasculopathy	53	45.3
Anterior Segment		
Complicated Cataract	1	0.85
Herpes Zoster Ophthalmicus	1	
Viral Keratitis	1	0.85
Anterior Uveitis	1	0.85
Non Healing Fungal Ulcer	1	0.85
Inflammatory Glaucoma	1	0.85
Posterior Segment		
HIV Retinopathy	4	3.42
CMV Retinitis Burnt Out	2	1.71
ARN	1	0.85
Toxoplasmosis	2	1.71
Retinal Vasculitis	1	0.85
Intermediate Uveitis	1	0.85
Retinitis	1	0.85
Neuro Ophthalm		
Multiple Cranial Nerve Palsy	1	0.85
Optic Neuritis	1	0.85
Optic Atrophy	4	3.42
Orbit	NIL	

Table 2: Shows Correlation of ocular findings with CD4 counts N=156 eyes

ADNEXA	CD4 COUNT		
	<200	200-500	>500
BLEPHARITIS	18	22	16
MOLLUSCUM CONTAGIOSUM	0	4	0
STYE	0	2	1
HERPES ZOSTER	0	1	0
ALLERGIC / INFECTIVE CONJUNCTIVITIS	2	8	2
CONJ. MICROVASCULOPATHY	19	34	52
ANTERIOR SEGMENT			
COMPLICATED CATARACT	0	2	2
HERPES ZOSTER OPHTHALMICUS	0	0	1
VIRAL KERATITIS	0	1	0
ANTERIOR UVEITIS	0	0	2
NON HEALING FUNGAL CORNEAL ULCER	0	1	0
INFLAMMATORY GLAUCOMA	0	0	2
POSTERIOR SEGMENT			
HIV RETINOPATHY	0	6	1
CMV RETINITIS BURN'T OUT	0	0	3
ARN	2	0	0
TOXOPLASMOSIS	0	2	2
RETINAL VASCULITIS	0	0	2

RETINAL VASCULITIS	0	0	2
INTERMEDIATE UVEITIS	0	0	2
RETINITIS	2	0	0
NEURO OPHTHAL			
MULTIPLE CRANIAL NERVE PALSY	1	0	0
OPTIC NEURITIS	1	0	0
OPTIC ATROPHY	2	0	6

Blepharitis and conjunctival microvasculopathy was present in patients irrespective of CD4 count.'

DISCUSSION

Overall mean age of patient in this study was 38.14± 11.84 with majority of HIV patients fall under 20-40 years (58%) comparable to Gururaj et al4 study which had 54%. This study shows higher male prevalence in comparison to female. This finding was similarly noted in Biswas et al5, Lamichhane G et al6 study. Sexual route was the most common mode of disease transmission and this was also observed in study by Biswas et al5 and Gururaj et al4. Majority of the patients overall in this study was in stage I and II 73%, & respectively comparable with Gururaj et al4, Amare et al7 study. Most common ocular manifestation was conjunctival microvasculopathy, blepharitis not comparable with other studies. This can be attributed to geographical change in location of study.

Table 3: Shows CD4 Counts and eye involvement

CD4 Counts	Gururaj et al	Pathai et al	Amare et al	Present study
N	46	26	27	78
<200	92.90%	76.92%	25.90%	15%
200-500			48.10%	50%
>500	7.10%	23.10%	25.90%	34%
P	0.001	<0.01	<0.01	0.0235

P value in our study was 0.0235, which was significant. This significance was observed in all the above mentioned studies. Ocular manifestations seen to increase with decrease in CD4 cell count especially in levels <500 cells/mm³.

CONCLUSION

This study recommend a routine screening of HIV seropositive patients upon diagnosis along with CD4 counts, prior to starting Anti Retrovirus treatment to obtain a baseline ocular status.

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