

Ocular Manifestations of HIV And Aids

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Abstract: The role of Ophthalmologist in the diagnosis and management of AIDS is becoming increasingly important .Not only thus the eye reflect systematic disease but ocular involvement may proceed systemic manifestations .The eye is the most common organ affected due to AIDS .Ocular involvement in AIDS is about 50-70%.Ocular lesions are varied and affect almost all structures of the eye.

Keywords: AIDS,Ocular Manifestation,leisions

1. Introduction

This Study was undertaken primarily to study ophthalmologic aspects of HIV infected and AIDS patients attending to outpatient department and referrals from STD,TBH and other Departments

To determine the Prevalence and frequency of common ocular diseases in HIV

To highlight the necessity of being move vigilant towards a typical manifestations of common ocular diseases in diagnosing HIV disease

To establish the various clinical manifestations of HIV disease and to create awareness about the importance of these manifestations amongst the clinicians

To know the clinical progress and response to various treatment modalities of these diseases

To determine the proportion of patients presenting primarily with ocular manifestations

To present visual handicap in HIV/AIDS patients by early diagnosis and prompt treatment

2.Background

The Ocular lesions associated with AIDS can be categorized into 4 main groups[1]

1.Non infections retinal microangiopathy

2.Opportunistic infection caused by viruses,bacteria,protozoa

and fungi

3.Unusual neoplasms such as Kaposi's sarcoma and Burkitts lymphoma

4.Neurophthalmic lesions

Below table provides ocular leisions in various parts of the eye[2].

Common Ocular adnexal lesions in AIDS patients

a)	Herpes zoster ophthalmicus (HZO)
b)	Kaposi's sarcoma of eyelid, conjunctiva
c)	Molluscum contagiosum of the eyelid
d)	Conjunctival microvasculopathy
e)	Pyogenic infection of eyelid and adnexa
f)	Allergic or Infective conjunctivitis

Common anterior segment lesions in AIDS

patients

•	Dry eye
•	Infective keratitis (Varicella Zoster, herpes simplex, microsporidia)
•	Anterior uveitis
	- Cidofovir induced
	- Rifabutin induced
	- Spill over from cytomegalovirus retinitis
•	Herpes zoster ophthalmicus (HZO)

•	Cranial nerve palsies
•	Papilloedema
•	Headache
•	Retro orbital pain
•	Optic neuropathy

Common Posterior segment Lesions in AIDS Patients[4]

a)	HIV retinopathy
b)	Cytomegalovirus retinitis
c)	Progressive outer retinal necrosis
d)	Acute retinal necrosis
e)	Herpes zoster retinopathy
f)	Pneumocystis carinii choroidopathy
g)	Ocular syphilis
h)	Fungal endophthalmitis (cryptococcus, candida)
i)	Mycobacterial infection
j)	Toxoplasmic retinochoroiditis.

Common orbital lesions in Aids patients[5]

•	Burkitt's lymphoma
•	Orbital cellulitis (aspergillus)

Common Neurophthalmic lesions in AIDS patients

Adnexal and anterior segment lesions

HIV infections affecting the ocular adnex and anterior have been reported to occur in 50% of the cases[6].

3.Observations and Results

Table 1:Age and sex distribution

Total no of cases=100[7]

Age (Yrs)	Number of HIV Cases	
	Males	Females
1-10	1	1
11-20	3	2
21-30	38	12
31-40	19	5
41-50	9	2
51-60	8	0
	78	22

One hundred patients were examined 78 were males and 22 Females. Majority of these cases belongs to age group of 20 and 40 years

The youngest patient were 8 year old(one male and one female) oldest 60 years male

Table 2: Number of sexual contacts[8]

Males	Number of Sexual Contacts Commercial Sex workers
54	Multiple
14	Single
9	No history of contacts

54 Males patient had Multiple Sexual Contacts with Commercial Sex workers.14 had single Exposure to CSW'S and 9 patients did not give any history of Sexual Contracts

Table 3:Marital Status[9].

Category	Number of HIV Cases
Married	55
Un-married	41
Widows	3

Out of these 100 patients 55 Married,41 were unmarried and three widows Out of the 22 female patients 15 were housewives,2 were Commercial Sex workers,2 were unmarried and three were widows. Out of 78 male patients 40 were married and 38 were unmarried

Table 4:Mode of Transmission[10]

Type	Number of Cases
Hetero Sexual	97
Homo Sexual	01
Blood Transmission	02

The predominant mode of transmission was heterosexual in 97 patients,,homosexual transmission in 1 patient and through blood transfusion in 2 patients

Table 5:Occupation

Category	Number of Patients
Labourers	47
House Wives	15
Drivers	14
Students	4
Business Men	5
Destitutes	10
Clerks	3
Commercial Sex Workers	2

Out of 100 HIV cases 47 were manual labourers 15 were house wives,14 were drivers,4 students 5 businessman 10 destitutes 3 were clerks and 2 were CWCS

Out of 15 house wives 7 could bring their husbands for HIV screening. All were HIV positive and asymptomatic.

Out of 40 married males 19 brought their wives for HIV screening,15 were HIV positive and asymptomatic,4 were HIV negative.

Out of 55 married patients 35 had children 20 brought their children for HIV screening 11 were HIV positive and asymptomatic, 9 were HIV negative.

Lymphadenopathy was noticed in 38 patients out of which 5 had generalized lymphadenopathy.Commonest lymphadenopathy was inguinal lymphadenopathy

OCCUPATION WISE DISTRIBUTION

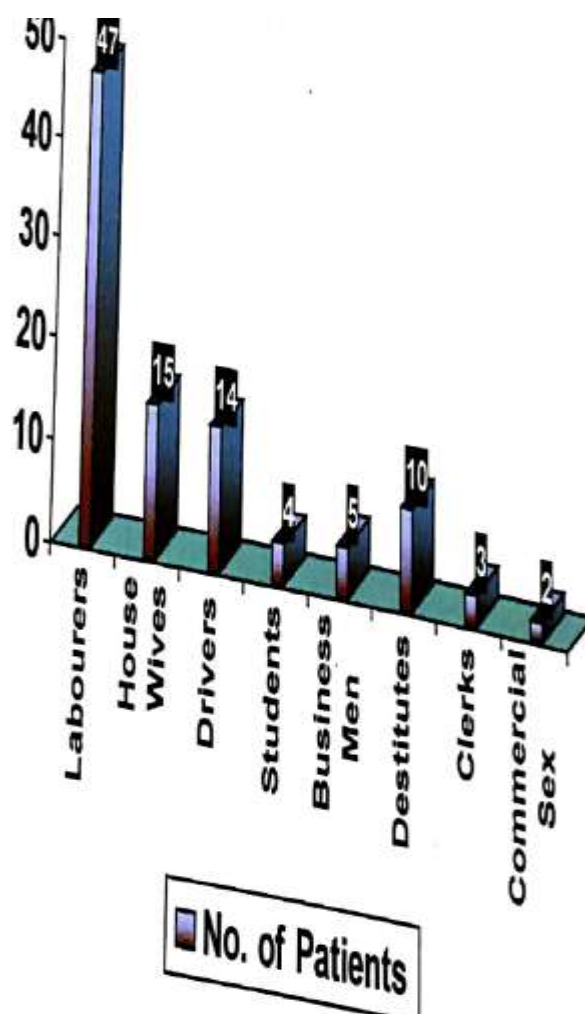


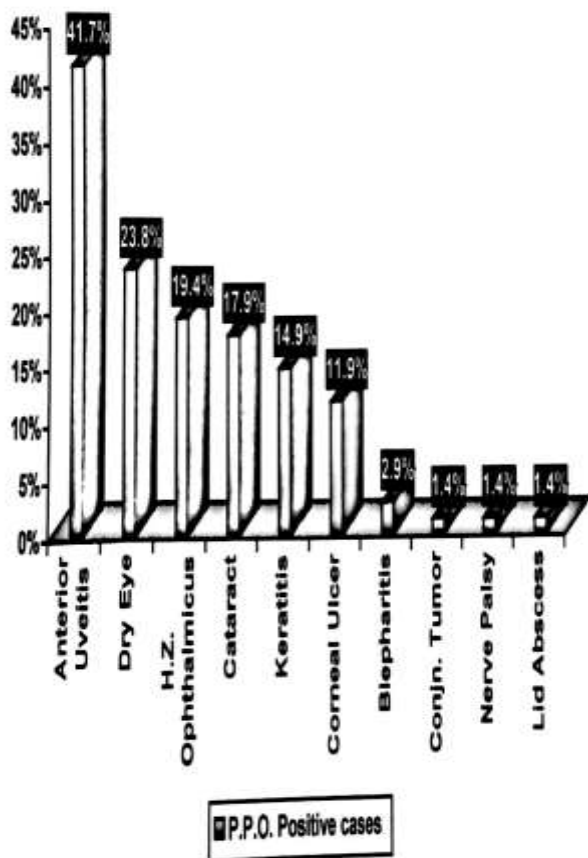
Table 6: Ocular manifestation of HIV and AIDS Disease

Total Number of cases-100
Ocular Findings Present in-67
Without Ocular Findings-44

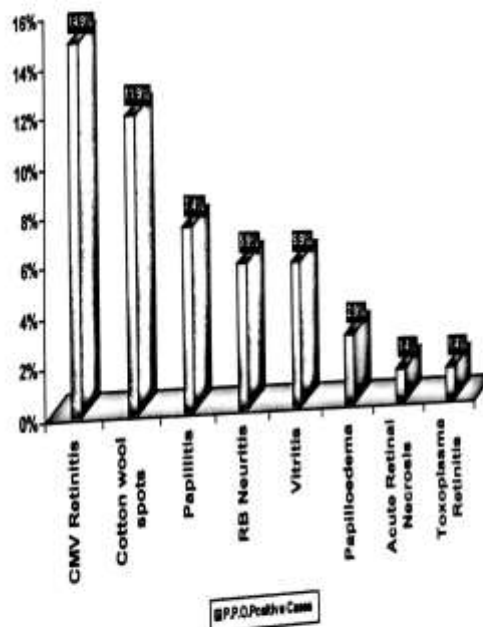
Type of Ocular Manifestations	Number of findings present in 67 Cases	Percentage of diseases present in Ocular Positive cases
Anterior Segment		
Corneal Ulcer	8	11.9%
Herpes Zoster Ophthalmicus	13	19.4%
Dry Eye	16	23.8%
Keratitis	10	14.9%
Anterior Uveitis	28	41.7%
Cataract	12	17.9%
Blepharitis	2	2.9%
Conjunctival tumour	1	1.4%
Nerve Palsy	1	1.4%
Lid Abscess	1	1.4%
Total	92	137.3%

Type of Ocular Manifestations	Number of findings Present in 67 Cases	Percentage of Diseases present in Ocular Positive cases
Posterior Segment		
CMV Retinitis	10	14.9%
Acute Retinal Necrosis	1	1.4%
Toxoplasma Retinitis	1	1.4%
Cotton Wool Spots	8	11.9%
Papillitis	5	7.4%
Papilloedema	2	2.9%
RB Neuritis	4	5.9%
Vitritis	4	5.9%
Total	35	52.2%

Anterior Segment involvement

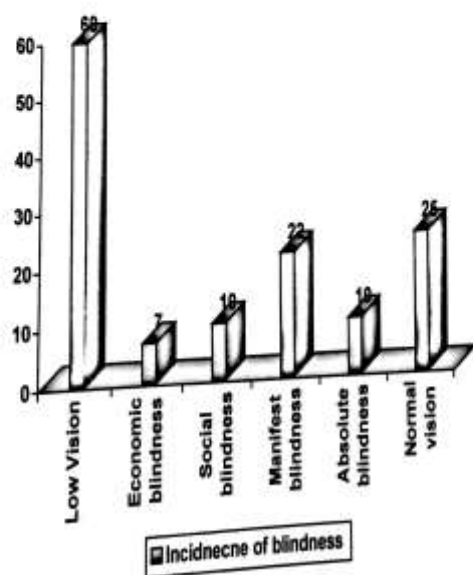


POSTERIOR SEGMENT INVOLVEMENT



INCIDENCE OF BLINDNESS RELATED TO HIV & AIDS

Low vision	6/18-6/60	60
Economic blindness	6/60-3/60	07
Social blindness	3/60-1/60	10
Manifest blindness	1/60-PL	22
Absolute blindness	No pl- No pl	10
Normal vision	6/6-6/6	25



4. Discussion

The clinical study has been undertaken for a period of two and half years to document various types of ocular diseases in HIV/AIDS. Patients in this region. Total 100 HIV patients studied out of 67 of them who had ocular lesions were examined and investigated.

Out of 100 HIV patients 78% were males and 22% were females. Male to female ratio 78:22=3:5:1. Majority of the cases belong to 20 to 40 years of age group; sexually most active age group. This is an alarming feature of HIV epidemic in India. The highest incidence of HIV infection was seen in married patients 55% compared to unmarried 41%.

71% of HIV positive male patients had multiple sexual contacts with CWCS. Most of the housewives got the HIV infection through their husband, who had multiple sexual contacts. In one female patient the HIV transmission was due to blood transfusion during the major surgery. In one male patient, the HIV transmission was due to blood transfusion following an accident

The most common mode of transmission was hetero sexual transmission in 97%. The highest incidence of HIV infection was seen in manual labourers (43%) may be due to illiterate, multiple sexual contacts and unprotected sex followed by housewives (15%) and drivers (14%). Other groups of HIV positive cases include students (4%), businessman (5%) and dentists (10%) etc.

Various diseases affecting the eye occur throughout the course of HIV infection. Kaposi Sarcoma a common manifestation in the western studies was not seen in any of these patients.

Hairy leukoplakia reported very commonly in HIV by various studies. In our study no single case of

Hairy leukoplakia was observed. Similarly orbital lymphomas, Endophthalmitis were also not found in our study.

Majority of Ocular manifestations with HIV are of infective origin in our study. Viral infections are commonest (30%) ocular manifestations of HIV disease in the present study. Commonest presentation was with cotton wool spots.

CMV Retinitis, Herpes Zoster was the commonest viral infections seen in this study. Some of these patients were treated with Acyclovir 800mg 5 times daily for 7 days. The other common viral infection in our study was Herpes Simplex. The characteristics clinical feature of Herpes Simplex in our study was ulcerated forms seen over the lips, surpa, public areas and genitalia. Extensive ulceration with prolonged course not responding to routine antibiotics were suspected clinically as herpes simplex with HIV background. These cases were given specific acyclovir treatment 200mg orally 5 times a day daily for 7 days

And lesions regressed.

Adverse cutaneous drug reactions occur more often in HIV infected persons than the general population.

Ocular manifestations may be important presenting manifestation or may be associated finding. In more than 56% of the cases in our study patients presented with one of ocular manifestations. Therefore eye is the most common organ affected due to AIDS. Ocular involvement in AIDS is as high as 75%. Ocular lesions are varied and affect almost all structures of the eye. This study highlights the importance of clinical presentation of various ocular diseases in HIV disease.

5. Conclusion

The present study shows that AIDS related ophthalmic manifestations are significant ophthalmic problem and the

anterior segment involvement is common with Herpes Zoster virus and the posterior segment involvement is commonly associated with CMV retinitis correlating CD4 and CD8 counts.

It may be emphasized that bringing awareness to the general public and the treating physician about the various ophthalmic manifestations of AIDS we may tackle the dreaded complication at any stage and therefore prevent the occurrence of blindness to some extent with the present modalities of the treatment. There is an urgent need for better diagnostic and therapeutic approaches to tackle this sight threatening disease.

The constraints expressed by the author help in improving the diagnostic and health care promotion by better availability of ART drugs along with anti CMV drugs like Foscarnet and Ganciclovir at an affordable price or free supply by the Govt and training of ophthalmologists to give intravitreal injections at medical college hospitals there by alleviate the ocular complications

The information on ocular complications of the AIDS may be propagated by handouts both to the doctors and the patients by the Govt and NGOS

References

- [1].Schuman JS, Friedman AH(1983) Retinal manifestation of AIDS: CYTOMEGALOVIRUS, CANADIA, ALBICANS, CYPTOCOCCUS, TOXOPLASMOSIS
- [2].The World health Report 1995 WHO
- [3].Physician guide on "HIV/AIDS Prevention and Treatment awareness:-NACO publication-2006
- [4].S.Lightman, H.M.A.Towler-The eye in AIDS ophthalmology symposium
- [5].RAO A Nursing "AIDS and its Complications"-1994
- [6].Ocular lesions in AIDS in India-practical guidelines for diagnosis and management-Jyotiemy Biswas(2001) 1st edition
- [7].Parson's Diseases of eye-19th century, Revised by Ramanjith sibeta and Radhika Tandon
- [8].L.C.DUTTA; Modern Ophthalmology-ocular-Manifestations of AIDS
- [9].JACK.J.KANSKI; Clinical Ophthalmology-Uveitis in chronic systemic infection.
- [10].Centres for disease Control Pneumocystics Pneumonia, LOS angles, mnr30;250,1981