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Ophthalmology

Eye Lesions during HIV/AIDS Infection: About 75 Patients

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Abstract **Original Research Article**

Ocular attaints during AIDS are multiple and can affect both the ant segment, post, and appendices**.** Post-segment disorders may be directly related to HIV itself, opportunistic infections, or neoplasia dominated lymphoma. Changes in vision are mainly due to retinitis CMV (most common) and retinitis VZV (most severe) Eye surveillance of AIDS patients is therefore very important. General antiviral treatments do not prevent relapse and have hepatic and renal side effects.

Keywords: HIV/AIDS Infection, Post-segment disorders, Eye surveillance, outpatient treatment center.

INTRODUCTION

HIV (human immunodeficiency virus) is a virus that attacks the body's immune system. If HIV is not treated, it can [7] to AIDS (acquired immunodeficiency syndrome) [1].

OMS 2010 [2] - World: 33.3 million people living with HIV;
Eye injuries may be of interest to:

Ocular Adnexa, anterior and posterior segments.
Compromise functional prognosis if not PXF*

The purpose of my work is to report eye lesions (their frequency and their nature) during the evolution of HIV/AIDS infection in a Moroccan population.

MATERIALS AND METHODS

A prospective study with preliminary results on patients with seropositive or AIDS followed at the outpatient treatment center (ATC) or hospital.

The biological diagnosis of HIV infection was made using the ELISA (Enzyme-Linked Sorbent Assay) and Western Blot tests.

CD4 was measured using automatic techniques (Automatic Flow Cytometry (FACS Count) and laser flow cytometry.

Every patient has benefited from a review of the file, Bilateral and comparative ophthalmologic examination.

Some patients were referred for the supplement to support.

PXF* : capsule pseudo-exfoliation

RESULTS

Table 1: Distribution by age group

Age groups	Frequency	Percentage
0 — 14 years	**3**	**4%**
16-30 years	**11**	**14,66%**
31-45 years	**41**	**54,46%**
46-60 years	**15**	**20%**
61-75 years	**5**	**6,66%**
Total	**75**	**100%**

- Average age: 41 years (7-71 years); >50% [31- 45 years [, 4% ≤ 15 years (2 boys of 7 years each of HIV-positive parents and an emancipated young woman of 15 years).

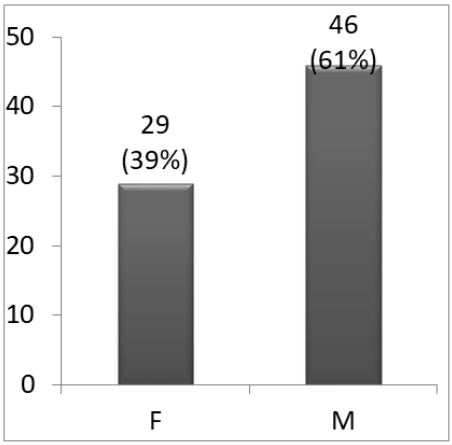

Fig 1: Distribution by gender (Gender ratio: 1,88.)

Table 2: Distribution by rate of CD4

Number of CD4/mm³	Frequency	Percentage
ND	**1**	**1,33**
< 50	**8**	**10,66**
[50,100[	**5**	**6,66**
[100,200[	**14**	**18,66**
> 200	**47**	**62,66**
Total	**75**	**100**

- Average of CD4 rate: 274.61 cell/mm³ (2 807 cell/mm³);
- 10,66% P : CD4 < 50 copies/mm³;
- 6,66% P : CD4 [50- 100/mm³].

Table 3: Anterior segment disease

	Lesions	Frequency	Percentage
OCULAR ADNEXA + AS	**Blepharitis**	**1**	**1,33**
	Complicated cataract	**3**	**4**
	Chalazion	**1**	**1,33**
	Conjunctivitis and LCET	**7**	**9,33**
	Eyelid edema	**3**	**4**
	Kaposi Sarcoma	**1**	**1,33**
	Second eye syndrome	**2**	**2,66**
	Anterior uveitis	**3**	**4**
	Ophthalmic Zona	**1**	**1,33**

Table 4: Posterior segment lesions (SP)

	Lesions	Frequency	Percentage
PS	**Venous dilation and without hemorrhage**	**1**	**1,33**
	Cotton wool spots	**1**	**1,33**
	CMV retinitis	**3**	**4**
	Ocular Toxoplasmosis	**2**	**2,66**

Infection of Ocular adnexa+ AS*+PS*	**29**	**38,66%**

AS*: anterior segment / PS*: Posterior segment

Table 5: Correlation of CD4 rates and ocular involvement (ocular adnexa + AS)

	Lesions	Average of CD4
OCULAR ADNEXA + AS	Blepharitis	280
	Complicated cataract	42
	Chalazion	187
	Conjunctivitis and LCET	311
	Eyelid edema	80
	Kaposi Sarcoma	124
	Second eye syndrome	659
	Anterior uveitis	59
	Ophthalmic Zona	non-specified

Table 6: Correlation between CD4 rate and PS involvement

	Lesions	Average of CD4
SP	Venous dilation and without hemorrhage and without cotton wool spots	143
	Cotton wool spots	100
	CMV retinitis	14
	Ocular Toxoplasmosis	89

DISCUSSION

Gender:

Female predominance [5, 6].

Our series: male predominance (Table 1) El Mansouri (Morocco) et Matos (Brazil) [3].

This male trend ≠ global situation of the HIV epidemic where epidemic mainly affects women

Age:

The average age of our patients (41 years)

Eyana (34 years), El Mansouri (35 years), Ebana (38 years), Lamzaf (39 years),

Young adults are mostly affected

The prevalence of eye damage:

Our Serie: 38,66%

Western literature: 42% - 75 % [10,14,15];

France, B. Gerard, 52,17% pediatric population [4]

African Series:

Morocco: Lamzaf: 24%, RCA, Yaya G.: 30 %, Eyana: 60,2%, et Balo: 60,5%, in Togo [5], in Cameroun, Ebana: 63,2%.

The disparity in prevalence: epidemiological specificities, PXF, Recruitment.

Lesions of Anterior segment and adnexa / infectious disease (Table 3) idem Eyana, Ebana

Kaposi Sarcoma

In our series 1 case was suspected: typical lesion, nodular, purple, hard, and painless at the outer 1/3 of the upper end of the lower right eyelid. In Togo Eyana 1 case (0,4%); Ebana 2 cases (3,5 %) in Cameroun.

Anterior uveitis

3 cases (4%): CD4 at 59 cell/mm³.

Apart from other infectious etiologies:

HIV⇒anterior uveitis⇒HIV test/uveitis etiological assessment

Medicines/prevention of IO (rifabutin, cidofovir, sulfamates).

Uveitis [5, 7].

Complicated cataract

3 cases (4%)

Literature: 40% of uveitis of all causes complicate cataract [6]

Ophthalmic Zona

Eyana: 20 cases (7,1%), Ebana: 7 cases (12,3%).

Our Serie 1 case (1,33%) Inaugural demonstration of HIV infection.

Ophthalmic Zona : HIV Test

61% of patients < 44 years with ophthalmic zona, HIV test (+).

CMV retinitis

Definition of AIDS, most common OI, 30-40% of PHAs, Before the HAART era, CD4 < 50 cell/mm³; prognosis is dark 1 year.

Asymptomatic (40%), blindness in 2-3 months FO monitoring [4-6].

In France, B. Gerard, 0 cases (pediatric population HIV positive).
In Togo: Eyana 2 cases (1.8%), Balo, 43 cases (20%)
In Morocco, Lamzaf (2010) 4 cases (3.5%), El Mansouri (1999) 18 cases (4.8%),
In Cameroon Ebana 8 cases (14%),
Our series 3 cases (4%), CD4 average of 14 cel/mm³.

Correlation between CD4 levels and the occurrence of this condition.
S. Cardine, 1 cas de rétinite à CMV / CD4 normal (423 cel/mm³) [7].

Ocular Toxoplasmosis
2nd ocular IO occurs in 3-4% of cases.
El Mansouri 1 case (0,2%), Lamzaf in Morocoo 1 case (0,9%), our serie cases (2,66%), Matos (8,5%) and in Togo, Eyana (8,2%),
CD4: 89 cellules/mm³⇒CD4 correlation ↔ Ocular Toxoplasmosis
Rate agrees with the notion that, chorioretinitis toxoplasmosis occurs earlier than CMV retinitis.

CONCLUSION

Eye lesions during HIV infection are not uncommon (38.66% in our series). They can lead to the diagnosis of HIV infection and/or complicate its progression.

Severe some of these eye lesions can lead to blindness, thus altering the quality of life of these patients already sufficiently weakened and precipitating their death.

The ophthalmological examination must be part of the initial assessment and monitoring of HIV-positive or AIDS patients. Do not hesitate to ask for HIV serology in case of suspicious lesions.

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