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Research Article

Pattern of ocular manifestations of Acquired immunodeficiency syndrome in Mali

Théra JP[1], Hughes D[2], Tinley C[2], Bamani S[3], Traoré L[3], Traoré J[3]
[1]Pediatric Ophthalmologist and Forensic Medicine Doctor, Faculty of Medicine / Institute of African Tropical Ophthalmology, Bamako (Mali)
[2]Pediatric Ophthalmologist, Consultant CCBRT Hospital, Dar Es Salam (Tanzania)
[3]Professor, Department of Ophthalmology, Faculty of Medicine / Institute of African Tropical Ophthalmology, Bamako (Mali)

***Corresponding author**
Dr. Japhet Pobanou THERA
Email: therajaphet@yahoo.fr

Abstract: Ocular manifestations are very common in HIV positive patients. They may be asymptomatic or symptomatic leading sometimes to loss of vision. In some Instance, ocular features can be the heralding signs of HIV infection.
Keywords: HIV, Ocular manifestations.

INTRODUCTION

Since the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) epidemic began in 1981. Ocular involvement has been a common finding [1]. The human immunodeficiency virus (HIV) infection has spread worldwide, with various adverse healths and economic implications, particularly in the developing world [2]. HIV causes a wide spectrum of diseases and it is undoubtedly a multisystem disorder, but the ophthalmic disease does affect 70-80% of the patients with HIV infection sometime during the natural history of their infection. Various studies have demonstrated that 40-45% of the HIV infected patients do have some or the other ophthalmic manifestations when they are examined by an ophthalmologist [3].

The .HIV/AIDS pandemic continues to present a major health challenge for sub-Saharan Africa, In Ethiopia, and adult HIV prevalence in 2009 was estimated to be between 1.4% and 2.8% [4]. Numerous ophthalmic manifestations of HIV infection may involve the anterior or posterior segment of the eye. Since the first report of the ocular manifestations of AIDS by Holland et al. in 1982, subsequent studies have described several AIDS related conditions in the eye and orbit [5]. Before the era of highly active antiretroviral therapy (HAART), ocular involvement was estimated to develop in 50% to 75% of patients with HIV infection, including retinal microvasculopathy, vascular occlusions, opportunistic infections such as cytomegalovirus (CMV) retinitis, and progressive outer retinal necrosis. A variety of other important AIDS-related manifestations involve the anterior segment, ocular surface, and adnexa [6, 7]. The ocular complications of human immunodeficiency virus (HIV) infection have been widely documented in North America and Europe. Cytomegalovirus (CMV) retinitis is a leading cause of blindness among HIV infected patients in industrialized countries [8]. The few published studies of HIV infected patients in Africa show a different pattern of ocular involvement; in particular, CMV retinitis appears to be uncommon in Africa [9]. In Mali, very few studies dealt with the issue of ocular manifestations of AIDS. The current study aimed to determine the pattern of ocular features in HIV positive patient.

MATERIAL AND METHODS

During a period of 5 months, all the patients who were referred by the Department of HIV positive patients were enrolled and examined with their informed consent into our study. The ophthalmological examination consisted of external examination, slit lamp examination, applanation tonometry, and fundoscopie. Data analysis were done using EPI-INFO software

RESULTS

Age of patients ranged from 23 to 65 years; the mean age was 35.16 years. The age group 30-39 years was predominant, 55.3% (n=20). Males accounted for 55.3% (21) and females were 44.7% (17); the sex ratio male: female was 1.2. 31 (81.6%) of our patient have ocular manifestation of AIDS. Blurred vision was the more frequent symptom, 68.4% (n=26) followed by

pain, 28.3% (n=10). Herpes zoster ophthalmicus was the most frequent ocular sign, 26.3% (n=10) followed by toxoplasmic retinochoroiditis and micovasculopathy with 23.7% (n=9) each one.

Table 1: Age distribution of patients

Age (year)	N	%
20-29	10	26.3
30-39	20	55.3
≥ 40	08	18.4
TOTAL	38	100

Table 2: Sex distribution of the patients

Sex	N	%
Male	21	44.7
Female	17	55.3
Total	38	100

Table 3: Symptoms distribution of the patients

Symptoms	N	%
Blurred vision	26	68.4
Pains	10	26.3
Tearing	2	05.3
Total	38	100

Table 4: Ocular findings

Ocular findings	N	%
Keratoconjunctivitis sicca	4	10.5
Herpessymplex keratitis	2	5.5
Cotton-wool spots	9	23.7
Extra ocular muscles palsy	1	2.6
Herpes zoster opthalmicus	10	26.3
Cytomegalovirus retinitis	1	2.6
Toxoplasmic retinochoroiditis	9	23.7
Microvasculopathy	9	23.7

DISCUSSION

The results of our study revealed that ocular involvement is frequent in HIV positive patients, for out of 38 patients presented with AIDS, 31 (81.6%) of our patients have ocular manifestation of AIDS. A World Health Organization (WHO) report estimated that currently around 32 million people including around 2 million children have been infected with human immunodeficiency virus (HIV) [10]. Of the total cases of HIV, 58% are thought to be sub-manifestations of HIV infection involving the anterior or posterior segment of the eye. Anterior segment findings include tumours of the peri-ocular tissues and a variety of external infections. Posterior segment changes include an HIV-associated retinopathy and a number of opportunistic infections of the retina and choroid. The increasing longevity of individuals with HIV disease may result in greater numbers of patients with opportunistic infections of the retina [11, 12]. The frequency of ocular features found in our study (81.6%) in much greater than those of some authors: in Korea, Sang Jin et al. found 28.5% of HIV patient presenting with ocular features [13], Kehinde in Nigeria found 125(12.3%) of VIH positive patient with ocular complications [14]. About the ocular pattern of our patients, Herpes zoster ophthalmicus was the most frequent ocular sign, 26.3% (n=10) followed by toxoplasmic retinochoroiditis and micovasculopathy with 23.7% (n=9) each one. In the study of Vehinke et al. [14], Herpes Zoster Ophthalmicus (HZO), was the commonest form of presentation in 87 (69.6%) patients, followed by ocular tumours in 17 (13.6%) patients and cotton-wool spots in 5 (4%) patients. A study performed in Ethiopia by Amare et al. revealed that the prevalence of HIV-associated ocular disease was 21.4%; retinal Microvasculopathy was the commonest finding seen in 9 (7%). The other ocular manifestations noted included: uveitis 4 (3.2%), ophthalmic Herpes Zoster 3 (2.4%), Seborrheic blepharitis 3 (2.4%) and Molluscum contagiosum 3 (2.4%) [4]. Microvasculopathy accounted for 23.7% (n=9) in our study, this result can be compare to those of the literature. A study conducted by Sahoo in Tanzania [15] found that the commonest ocular manifestation

observed was retinal microvasculopathy (25%). Previous cross-sectional studies from other African countries found micro-vasculopathy to be the most common manifestation, ranging between 10% and 42% [16]. A report from India found microvasculopathy in 50% of the study subjects [17]. Cytomegalovirus retinitis is still one of the commonest ocular manifestations and the major cause of blindness in patients with AIDS and, despite all the advances in AIDS treatment; it continues to be diagnosed [18]. In our study, only 1 patient had cytomegalovirus retinitis. In developing countries, CMV retinitis is largely undiagnosed and the scale of the problem is still not known as there is no strategy for screening and management of the problem [3].

CONCLUSION

Ocular manifestations are quite frequent in HIV/AIDS. They can be mild or sight threatening features. In some cases they are the first signs which lead to the diagnosis of AIDS.

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