

Value of ophthalmic features as a means of diagnosis of HIV/AIDS infection

To the Editor: The acquired immune deficiency syndrome (AIDS), first reported in 1981, is a ravaging pandemic on all continents, particularly in developing countries, where nearly 100 million people are affected, including about 5.4% of Nigerians.^{1,2} Patients with AIDS are likely to develop some form of ocular involvement during the course of illness, with approximately half presenting with ocular features of this disease.¹ This is a special challenge for the ophthalmologist, requiring special knowledge.³ A study in Romania found that about 70% had AIDS-related ocular involvement, but this HIV-related complication is now uncommon in the industrialized nations because of better quality of life and treatment.⁴ This is not the case in Sub-Saharan Africa, particularly in Nigeria. The majority of HIV positive/AIDS patients in Nigeria have no access to highly active antiretroviral treatment (HAART), which is generally available in Western countries.

We conducted a study aimed at documenting early ocular features of HIV/AIDS. Awareness of these features could help in early diagnosis and treatment of the infection. Between January 1999 and December 2002, 3776 new patients were seen at the eye clinic of Obafemi Awolowo University Teaching Hospital, Ile-Ife. All had a comprehensive ophthalmologic examination using slit lamp examination, direct and indirect funduscopy, and refraction among others. Other associated systemic features that constitute the symptoms and signs of clinical AIDS

were identified based on WHO HIV/AIDS defining criteria. Patients were given pre- and post-test counseling by trained nurses, and serologic tests for HIV screening. Biopsy of the conjunctiva lesions was done after obtaining informed consent. Testing for HIV-1 and HIV-2 antibodies was done using ELAVIA-2, with confirmation by the Western immunoblot method in HIV positive patients. All patients with herpes zoster ophthalmicus and skin lesions were further managed by the dermatologist.

Of the 3776 new patients, 11 (0.29%) were found to be HIV positive. These represented 1.7% of the 680 HIV/AIDS patients diagnosed at the hospital during the study period. There were 7 males and 4 females (1.75:1 ratio). Ages ranged from 16 to 56 years, with a mean (+SD) age of 32±2.7 years. One had squamous cell carcinoma of the conjunctiva, and 4 (36.4%) had herpes zoster ophthalmicus (3 males and 1 female). One had lateral rectus muscle palsy and associated optic atrophy. Two patients (18.2%) had bilateral anterior uveitis, one had right panuveitis with rubeosis iridis. Diagnosis of retinopathy was made in two patients. None of the patients was placed on HAART due to financial constraints and lack of access to HAART. The majority (54.6%) of the HIV patients defaulted while the others were referred to other specialists for further management.

The results confirm that without a high index of suspicion, a number of HIV/AIDS patients presenting in the eye clinic would go undiagnosed. Our findings confirm the observation of other workers that herpes zoster infection in apparently healthy-looking young adults is a marker of

HIV infection in Africa.^{5,6} Two patients had HIV-related retinopathy. One had generalized retinal oedema with a few cotton wool spots (CWS) and a lot of hemorrhages while the other had macular oedema and retinal hemorrhages. She later developed frank cutaneous herpes zoster before she defaulted from the eye clinic. HIV retinopathy, a non-infectious microangiopathy has been reported as the most common ocular manifestation of HIV infection while opportunistic ocular infections, particularly CMV retinitis, are a major cause of morbidity in patients with AIDS.⁷ Most patients with HIV disease demonstrate CWS at some point during their illness. The presence of CWS in healthy HIV positive patients has relatively little clinical significance, but the presence of CWS in patients with very low CD4 counts and advanced HIV disease is a negative prognostic sign.¹ The association of HIV with certain malignancies, such as Kaposi's sarcoma and squamous cell carcinoma (SCC) of the conjunctiva, has been well documented in Malawi¹ and Rwanda.⁵ SCC of the conjunctiva may be the only manifestation in an otherwise healthy-looking adult.¹ Also, in this study, SSC of the conjunctival and right lateral rectus muscle palsy with associated optic atrophy were seen as isolated lesions.

The fact that a significant percentage (1.7%) of HIV/AIDS cases diagnosed in the hospital came through the eye clinic argues for greater attention to the diagnosis of this scourge during presentation to the eye clinic. We advocate a massive public health enlightenment of the general population on HIV/AIDS. Furthermore, we hope that African governments will develop the political will to

provide HAART to the teaming population of patients with AIDS.

B. O. Adegbehingbe
Ophthalmology Unit
Department of Surgery
College of Health Sciences
Obafemi Awolowo University
Ile-Ife, Nigeria

A.O. Olasode
Department of Dermatology
and Venerology
College of Health Sciences
Obafemi Awolowo University
Ile-Ife, Nigeria

Correspondence:
Dr. B. O. Adegbehingbe
berniceola2003@yahoo.com.uk
Tel: 234-803-721-8094

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