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Allergic Conjunctivitis as the Initial Ocular Manifestation of HIV in Young/Middle Age Patients [20-40YRS]

Dr. V. Haritha[1], Dr. M. Kiranmai[2], Dr. Y. Srinivasulu Reddy[3], Dr. Sudhakar .P[4]

Abstract: ***Aim: To assess the incidence of allergic conjunctivitis as the initial ocular manifestation of HIV in patients aged 20-40yrs. METHODS: This was a retrospective case series analysis of 9 HIV positive young patients [20-40yrs], who presented with symptoms of itching, foreign body sensation, redness, pricking sensation of one or both eyes. Slit lamp examination revealed giant papillae/thickened tarsus-superiorly, limbal hyperplasia, superficial punctuate keratopathy on the cornea. None of the patients had past history of allergy. Majority of the patients had CD4 counts<300cells/microlitre. One of the patient subsequently developed OSSN. All the patients were started with HAART therapy with their CD4 counts monitored regularly, followed for 1 yr. Results: The mean follow up time was 1yr. Medical treatment was started with topical mastcell stabilizers,steroid eye drops and lubricants. MMC .02% eye drops were given for the patient with 0SSN. Patients were better symptomatically, keratopathy improved in all the patients and the vision was stable until the last follow up. Conclusion: Unilateral or Bilateral allergic conjunctivitis in young patients between 20-40yrs without prior history of allergy should raise a suspicion of seropositivity and to be treated both systemically and topically.***

Keywords: Allergic conjunctivitis, HIV infection, giant papillae, limbal hyperplasia, CD4 count

1. Introduction

Ophthalmic manifestations of HIV infection may involve the anterior or posterior segment of the eye. Approximately 70-80% of HIV-infected patients will be treated for an HIV-associated eye disorder during the course of their illness.Orbital and adnexal findings include tumors of the periocular tissues and external infections. Anterior segment manifestations consist of keratitis, keratoconjunctivitis sicca, iridocyclitis, and other complications. Posterior segment findings include a HIV associated retinopathy and a number of opportunistic infections of the retina and choroid.

In general, the CD4+ T-lymphocyte count has been used to predict the onset of certain ocular infections in patients who are HIV positive. A CD4+ T-cell count below 500/mL is associated with Kaposi sarcoma, lymphoma, and tuberculosis. A CD4+ T-cell count below 250/mL is associated with pneumocystosis and toxoplasmosis. A CD4+ T-cell count less than 100/mL is associated with Retinal or conjunctival microvasculopathy, Cytomegalovirus (CMV) retinitis, Varicella-zoster virus (VZV) retinitis, Mycobacterium avium complex infection, Cryptococcosis, Microsporidiosis, HIV encephalopathy, Progressive multifocal leukoencephalopathy. (1)(2)(3)(4).

In this study we report retrospective case series where allergic conjunctivitis presented as initial ocular manifestation of HIV infection in young/ middle aged patients.

2. Methods

This was a retrospective case series analysis of 9 HIV positive young patients [20-40yrs], who presented with symptoms of itching, foreign body sensation, redness, pricking sensation of one or both eyes. Slit lamp examination revealed giant papillae/thickened tarsus-superiorly, limbal hyperplasia, superficial punctuate keratopathy on the cornea. None of the patients had past history of allergy. One of the patient subsequently developed OSSN. All the patients were started with HAART therapy with their CD4 counts monitored regularly, followed for 1 yr.

3. Results

A total of 9 patients presented with symptoms of itching, redness, pricking sensation, foreign body sensation and increased pigmentation in the white part of the eye of one or both eyes. None of the patients had past history of allergic conjunctivitis. Out of the 9 patients 7 were male and 2 were female. The age group of the patients ranged from 20 to 40 years. Mean age of the patients was 28 years. Six of the nine patients were already diagnosed with HIV before presenting to us and in three cases HIV was diagnosed after presenting to us on investigating. Mean CD4 cell count was 280cell/microlitre which ranged from 150 to 500. In all the patients the best corrected visual acuity was 6/6 in both eyes on presentation. Slit lamp biomicroscopic examination revealed conjunctival injection, papillae and limbal hyperplasia with increased pigmentation around the limbus in all the patients(Figure:1). Two patients had giant papillae and thickened tarsus(Figure:2). Four patients had superficial punctate keratopathy. Posterior segment examination was normal in all the patients. All the patients were treated symptomatically with mast cell stabilizers, topical steroid drops in tapering doses and lubricants. All the patients improved symptomatically after treatment but 2 patients had multiple recurrences in a short span of time. Careful history taking and counselling revealed that they were non-compliant to HAART therapy. CD4 cell count of these two patients was less than 200cell/microlitre. All the patients were followed for one year. CD4 cell counts were done every four months in all the patients. One patient developed Ocular surface squamous cell neoplasia and she was treated with topical 0.02% MMC drops.

4. Discussion

When a patient with no previous history of ocular allergies presents with new-onset allergic conjunctivitis after the age of 18 years, underlying HIV disease should be excluded, especially if this patient falls within the high-risk groups for HIV. In three of our cases who presented with allergic conjunctivits with no prior history of allergy we found HIV infection on investigating. The clinical picture in our patients is similar to vernal conjunctivitis with Conjunctival injection, limbal lymphoid hyperplasia, pigementation of conjunctiva around the limbus and papillae.(Figure:1)(Figure2). The pathogenesis of allergic conjunctivitis in HIV patient has not been elucidated clearly. The association between HIV infection and allergy is not clearly understood, but there doesn't appear to be a direct association between them. Studies have demonstrated an increase in IgE levels in HIV-infected people. IgE levels also increase with disease progression and decrease in Cd4 counts(5)(6)(7). Two of our patients who were noncompliant to HAART therapy with CD4 counts less than 200 cells/microlitre had multiple recurrences which may be due to increased IgE levels. Treatment of these patients is similar to normal allergic conjunctivitis patients which includes topical mast cell stabilizers, topical steroid drops in tapering doses and lubricants. Regular patient follow-up and complete ophthalmic evaluation to detect and treat other serious ocular conditions seen in HIV. CD4 cell counts and counselling regarding adherence to HAART treatment is vital in the management of these patients.

5. Conclusion

Unilateral or Bilateral allergic conjunctivitis in young patients between 20-40yrs without prior history of allergy should raise a suspicion of seropositivity need to be investigated and treated both systemically and topically.

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Figures and Legends

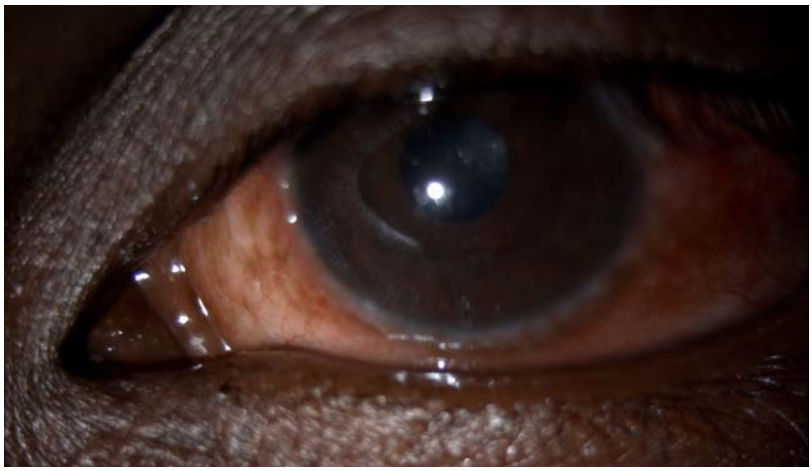

Figure 1:. Conjunctival injection and limbal hyperplasia seen in a 25 year old patient who presented with itching.

The patient had no prior history of allergic conjunctivitis.

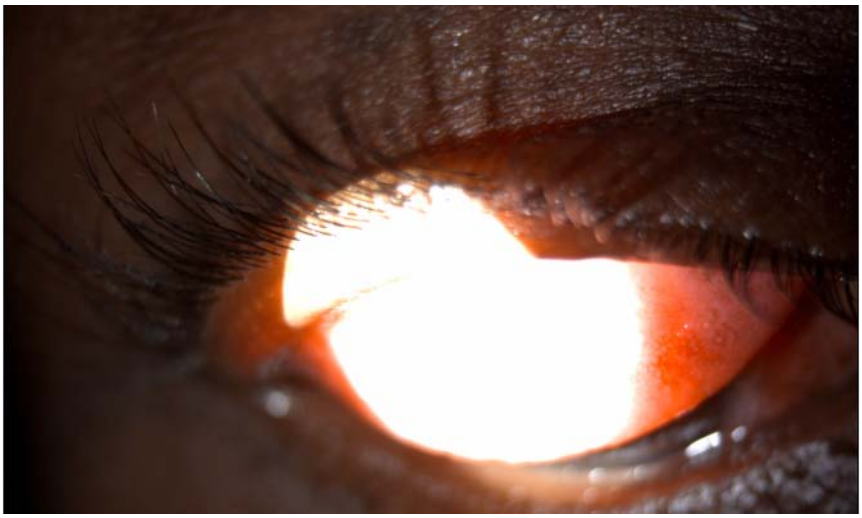

Figure 2: Papillae seen in upper palpebral conjunctiva in a HIV patient with no history of allergic conjunctivitis.