CASE REPORT

Sympathetic Ophthalmia Management and Role of Immunosuppressants

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Abstract

Presented here is a case of sympathetic ophthalmia that provided us an oppotunity to evaluate the efficacy of immunosuppressive drugs with steroids in reduced doses and their outcome in improving the visual loss in a young patient who had fast deterioration in his visual acuity.

Key Words

Sympathetic ophthalmia, Autoimmune uveitis..

Introduction

Sympathetic ophthalmia is a rare form of autoimmune uveitis and manifests in 90% of cases within first year after the penetrating injury or surgical intervention (1). The loss of vision leading to complete blindness of the only eye makes this entity a challenging one in its treatment and outcome. A landmark study has been done by Levine *et. al.* (2) to determine the relationship of enucleation and evisceration with occurence of sympathetic ophthalmia. In this study the authors concluded that evisceration is an effective and safe procedure with low risk of sympathetic ophthalmia.

The role of immunosuppressants and high dose steroids is well documented in the treatment of uveitis and vasculitis of retinal origin (3). However, it is the duration and high dose of steroids which makes the management problematic. Greenwood's study documented a decreased relapse rate when the dose of steroids was reduced in combination with immunosuppressive drugs like azothioprine (3). He documented an improved visual acuity in 64% cases and decreased inflammation in 56%. It has been clearly documented that immunosuppressants induce resolution of choroidal neovascularization associated with sympathetic ophthalmia (4). Of the other immunosuppressant, cyclosporine has also been used in cases of uveitis and sympathetic ophthalmia. It is a lipophilic cyclic polypeptide and produces calcium dependent specific reversible inhibition of transcription of Interleukin–2 (IL–2) and other cytokines. It reduces the production of a range of cytokines inhibiting the activation and maturation of various cell types including those involved in the cell mediated immunity (5). Stmola *et. al.* showed that doses of 5 mg. of cyclosporine/kg./ day improved the visual acuity in 32% of their cases (6).

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We present here a case of sympathetic ophthalmia where complete resolution of vision was restored after Immunosuppressant therapy.

Case Report

A 20-year old male was admitted with history of sudden loss of vision of right eye for the last 20 days. He had suffered a penetrating injury to the left eye with laceration of lid about two months back and underwent evisceration of the left eye. His general physical examination did not reveal any abnormality.

On local examination a scar mark in the left upper eye lid with symblepharon of the upper lid was noticed. There was a palpable mass in the left orbit which on exploration turned out to be posterior part of the globe with uveal tissue in it. The mass alongwith part of the optic nerve was removed. Examination of the right eye showed conjuctival congestion, receding of near point of vision and aqueous flare. The visual acuity in the right eye was 6/60. Fundus examination showed features of panuveitis. Based on these findings, a clinical diagnosis of sympathetic ophthalmia was made.

Histopathological examination of the eviscerated eye ball showed marked infiltration of the whole uveal tract by chronic inflammatory cells rich in lymphocytes and few plasma cells (Fig. 1). Also a few epitheloid cells were seen in the inflammatory infiltrate which contained melanin like pigment (Fig. 2). No epitheloid cell granuloma or any gaint cell were seen.

Patient had been given high doses of steroids for one week but had no improvement. Then he was started with three drug regime of Cap. Cyclosporine 75 mg. O.D. for three weeks, Inj. Cyclophosphamide 400 mg. I/V weekly for three weeks, Tab. Prednisolone 20 mg. Q.I.D. for three weeks. He had no untoward complication except for mild nausea and loss of appetite. After three weeks patient showed dramatic improvement in his vision and his visual acuity was 6/6 from 6/60. He received three such cycles each with an interval of three weeks. He was kept on low dose steroid for three months more after cyclophosphamide and cyclosporine were withdrawn. Presently his visual acuity is 6/6 and he is asymptomatic. The left orbit of the patient has been given cosmetic shell and he is being kept on two monthly regular follow up with fundus examination to evaluate for any relapse.

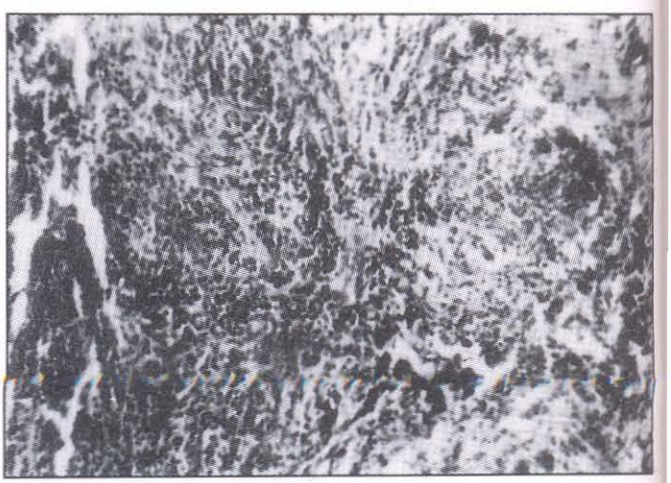

Fig 1. Photograph from the uveal tract showing dense chronic inflammation rich in lymphcytes (×100X).

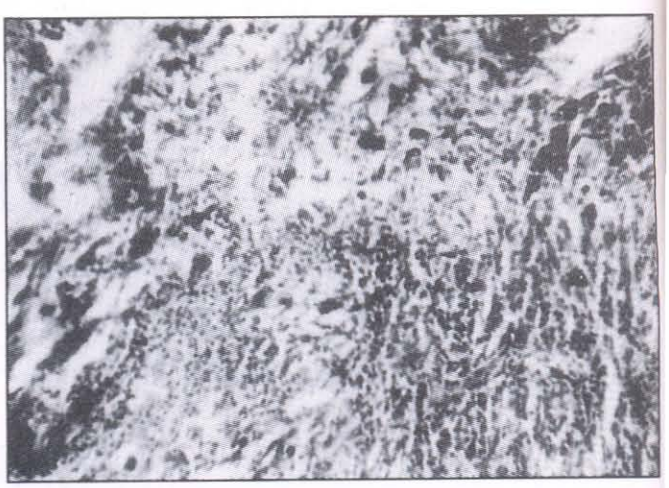

Fig 2. Shows melanin containing epitheloid cells admixed with chronic inflammatory cells (×100X).

Discussion

Patients with penetrating injury to the eye remain at risk for development of sympathetic ophthalmia. However, evisceration has been recommended as a safe and effective method with almost no risk of development of sympathetic ophthalmia but residual uveal tissue if left behind may lead to occurrence of this entity. In our patient it could possibly be the reason for sympathetic ophthalmia.

The management of this disease entity is challenging. Different centres use different drugs. The role of steroids in combination with immunosuppressive drugs is well documented and time tested with good clinical outcome (3). In our patient, we were not in a position to put him on Azathioprine in view of the high cost and poor affordability. So we substituted Cyclophosphamide in combination with Cyclosporine. We gave three weekly cycles of chemotherapy in combination with steroids. Our patient has shown complete resolution of his vision, his visual acuity returned from 6/60 to 6/6 and is stable after twelve weeks of therapy.

It was found that in the management of sympathetic ophthalmia, a dose reduction of steroids in combination with Cyclosporine and Cyclophosphamide gives excellent results with better tolerance. However, more such cases are needed to formulate a general policy.

References

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