

Intravitreal Steroids and Eales' Disease

Mohammad Shahid¹, Agha Hassan Feroze², Mazhar Ishaq³, Mushtaq Ahmed Baig⁴, Sana Hassan Feroze⁵
Department of Ophthalmology, Military Hospital^{1,2,3}, Army Medical College⁴, Islamic International Medical College⁵, Rawalpindi.

Abstract

Eales' disease is an idiopathic retinal vasculitis common in Saudi Arabia affecting young adults, usually men. This chronic disorder is extremely difficult to treat. Treatment modalities in current practice are oral steroids, panretinal photocoagulation and pars plana vitrectomy. One eye of a diagnosed patient with Eales' disease at Vitreoretinal Clinics, Department Of Ophthalmology, Military Hospital, Rawalpindi was administered intravitreal triamcinolone. Preoperative and one month post operative fluorescein fundus angiograms were performed. The post-operative fluorescein fundus angiogram showed decreased perivascular leakage of the fluorescein dye as compared to the preoperative fluorescein fundus angiogram. Our report validated a similar report from the Indo-Pak subcontinent. Intravitreal triamcinolone appears to be a promising treatment modality for retinal vasculitis.

Introduction

First described by Henry Eales in 1880, Eales' disease is an idiopathic obliterative vasculopathy that primarily affects the arterioles and venules of the adult peripheral retina.^{1,2} It is relatively more common in Indo-Pakistan Subcontinent and the Middle East,³ but cases have been reported throughout the world. Vascular sheathing, peripheral retinal nonperfusion and neovascularization are the principal clinical and angiographic findings. It remains a diagnosis of exclusion and retinal diseases such as sarcoidosis, diabetes mellitus, systemic lupus erythematosus, sickle cell disease, collagen vascular diseases and other causes of ocular inflammation or neovascularization must be excluded. Neuroimaging must be carried out with MRI scans to rule out CNS vasculitis. Systemic steroids, retinal photocoagulation to the non-perfused retina and early vitrectomy for recurrent vitreous haemorrhage may be offered.⁴

Case Report

A 32-year-old man from Punjab, Pakistan, presented to the Ophthalmology Department, Military Hospital, Rawalpindi with sudden, painless deterioration in vision in the right eye. He had perception of light in the right eye, with vitreous haemorrhage obscuring the view of the fundus. His vision in the left eye was 6/6 (20/20). On triple mirror examination, the left eye showed peripheral

perivasculitis, venous beading and small intraretinal haemorrhages. After thorough investigations, Eales' disease was considered to be the most probable diagnosis. Informed patient consent was obtained and all efforts were made to remain true to the guidelines of the declaration of Helsinki. The right eye was planned for pars plana vitrectomy. For the visually better left eye, we had a choice of oral steroids and/or panretinal photocoagulation. Oral Prednisolone is usually used here as the anti-inflammatory agent in a dose of 1mg/kg body weight for two weeks and then tapered over the following two weeks. Panretinal photocoagulation may be considered in cases of perivasculitis with early neovascularization elsewhere or at the disc.

We decided to use intravitreal steroids in the better eye to control the vasculitis, and provide stability to the blood retinal barrier. The patient was aseptically prepared for this procedure in the operation theater; 0.1 ml (4mg) of 40 mg/ml concentration of Triamcinolone acetonide (Kenacort®, Bristol-Myer Squibb) was injected into the posterior segment of the left eye 3.5mm behind the temporal limbus, with a 29G insulin syringe.

Figure 1 is a fluorescein fundus angiogram of this patient before the intravitreal steroid injection. This shows areas of capillary non-perfusion, profound venous beading with late extravasation of the dye from areas of perivasculitis. Figure 2 is a fluorescein fundus angiogram of the same

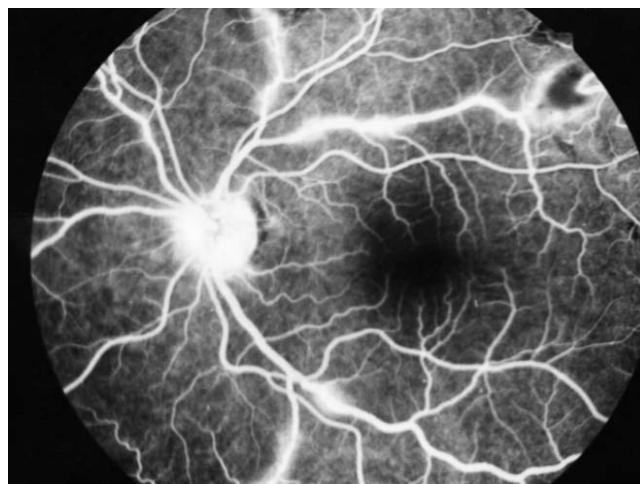


Figure 1. Left eye of a patient with Eales' disease. Note areas of capillary non-perfusion accompanying venous beading and late fluorescein dye extravasation from areas of perivasculitis.



Figure 2. Same eye as in Figure 1 one month after intravitreal steroid injection. Note the absence of venous beading and late perivascular fluorescein dye leakage.

perivasculitis. Figure 2 is a fluorescein fundus angiogram of the same eye after one month of intravitreal Kenacort injection. This photograph clearly shows no late leakage of the dye from areas of leakage in Figure 1. This particular patient has been followed up for 23 months, and shows no signs of periphlebitis in the left eye to date.

Discussion

Eales' disease is a diagnosis of exclusion with earliest stages of the disease being marked by perivasculitis. Being a rare entity, Eales' disease cases are even harder to diagnose early in the course of disease because of expensive investigations.

Our Center is the principle referral center for all military hospitals around Pakistan. Therefore, different modes of treatment have been offered to patients with Eales' disease at this hospital.^{5,6}

Oral steroids are usual management for Eales' Disease, but prolonged systemic use of steroids is associated with serious consequences. Intravitreal steroids may decrease the need for chronic immunosuppressive therapy, improve patient compliance and reduce the number of visits to the doctor.

Our results showed that intravitreal steroid IVTA adequately controls perivascular inflammation with resultant decrease in leakage of fluorescein dye from the retinal capillaries. This report validated the observations made by Pathengay et al⁷ and Agrawal et al.⁸

References

1. Elliot AJ. 30-year observation of patients with Eales disease. *Am J Ophthalmol* 1975;80:404-8.
2. Murphy RP, Gieser SC, Fine SL, Patz A. Retinal and Vitreous findings in Eales disease. *Invest Ophthalmol Vis Sci* 1986;27:121
3. Das T, Biswas J, Kumar A, Nagpal PN, Namperumalsamy P, Patnaik B et al. Eales' disease. *Indian J Ophthalmol* 1994;42:3-18.
4. Weber M. Eales. *J Fr Ophtalmol* 2001; 24: 984-6.
5. Ishaq M, Niazi MK. Usefulness of pars plana vitrectomy in managing asymptomatic eyes of Eales' disease. *J Ayub Med Coll* 2003;15:50-3.
6. Ishaq M, Niazi MK. Usefulness of laser photocoagulation in managing asymptomatic eyes of Eales disease. *J Ayub Med Coll* 2002;14:22-5.
7. Pathengay A, Pilli S, Das T. Intravitreal triamcinolone acetonide in Eales' disease: a case report. *Eye* 2005;19:711-3.
8. Agrawal S, Agrawal J, Agrawal TP. Intravitreal triamcinolone acetonide in Eales disease. *Retina* 2006;26:227-9.