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A CASE OF EALE'S DISEASE

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ABSTRACT

24-year-old apparently healthy male presented with sudden diminution of vision with confirmed clinical findings of Eales disease in both eyes.

Keywords: Sudden diminution of vision: Perivasculitis: Eales disease

INTRODUCTION

Eales disease is an idiopathic obliterative vasculopathy. It was discovered in 1880, by Sir Henry Eales, who first described the Eales disease in a cluster of young males.[1]. All patients were young and presented with complaints of vomiting, headache, constipation, epistaxis. Eales believed it to be a vasomotor neurosis, lead to rupture of retinal and nasal vessels with consequent haemorrhage.[2] Eale's disease affects healthy young adults. Male predominance (97.6%) has been reported in majority of cases. The predominant age of onset is between 20 and 40 years. One in 200-250 ophthalmological patients were detected to have Eale's disease. Retinal changes include perivascular phlebitis, peripheral nonperfusion, and neovascularization. Visual loss is characteristically caused by bilateral recurrent vitreous haemorrhage and its sequelae.[2] It is believed hypersensitivity to tuberculoproteins play an important role in etiology of Eales disease. Corticosteroids remain mainstay of therapy in active perivasculitis stage of Eales disease. Photocoagulation is the mainstay of treatment in proliferative stage of Eales disease. Pars plana vitrectomy has shown improvement in visual acuity in cases of recurrent vitreous haemorrhage. Application of endolaser is mandatory at the end of vitreous surgery. Additional procedures such as lensectomy and buckling may be done as and when required. [3]

Case

24-year-old young male, working as a furniture maker presented to outpatient department with chief complaints of sudden loss of diminution of vision in the RE since 5 days. This was acute in onset, painless, non- progressive in nature. No previous history of flashes, floaters and transient vision loss, headache, constipation, epistaxis, fever or sudden weight loss, cough. No significant family history

General examination revealed blood pressure :120/80 mmhg, pulse rate: 76bpm, no cyanosis, clubbing. On physical examination patient had supraclavicular lymph node swelling on right side.

On Ocular examination:

RE:

- Vision 6/12 with no improvement on pinhole.
- On slit lamp examination: Anterior segment in right eye was within normal limits.

Fundus examination revealed:

- Optic disc: flame shaped hemorrhages+, macula: edema+, foveal reflex absent, general fundus showed: sheathing of vessels, extensive intraretinal hemorrhages in all 4 arcades and perivasculitis in all 4 arcades

LE:

- Vision: 6/9
- On slit lamp examination: Anterior segment examination was within normal limits

Fundus examination:

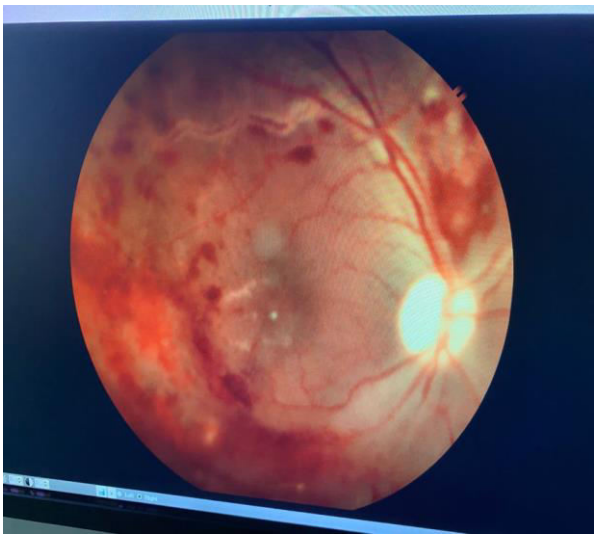
- Optic disc: flame shaped hemorrhages+, macula: Folds + over macula, foveal reflex absent, general fundus showed: sheathing of vessels, extensive intraretinal hemorrhages in all 4 arcades and perivasculitis in all 4 arcades

Intraocular pressure measured in both eyes was 14mmhg

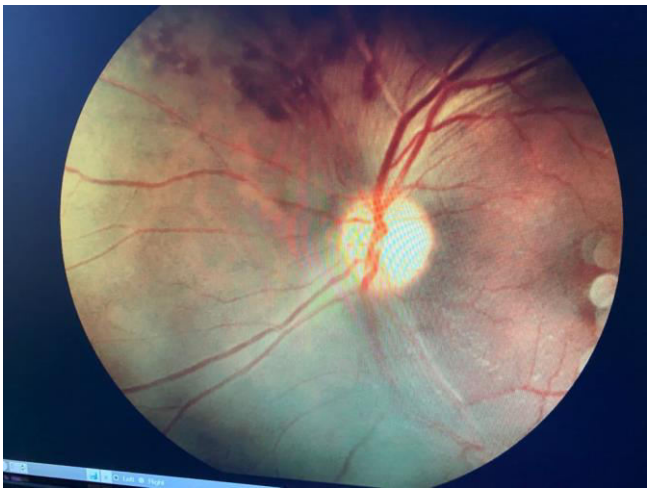
Patient was subjected to a panel of investigations including hemogram, esr, fnac. Erythrocyte sedimentation rate was elevated and measured 22mm/hr suggestive of inflammation. Fnac report of neck lymph node showed granulomatous lymphadenitis suggestive of Tuberculosis.

Patient was advised E/D PREDFORTE 1% QID. Patient was started on antitubercular treatment for 6 months. Patient had undergone Fundus fluorescein angiography followed by pan retinal photocoagulation laser.

Results: Patient had shown improvement on follow up after 6 months of using anti tubercular treatment. On examination, fundus revealed no signs of hemorrhages, macular edema had subsided and patient had symptomatic improved.



(RE): Showing perivasculitis, intraretinal hemorrhages.



Le: fundus showing sheathing of vessels, intraretinal hemorrhages.

DISCUSSION

Eale's disease is a disease of retinal vessel wall inflammation that leads to the obliteration of the lumen of the vessel, thereby leading to ischemia and neovascularization. It is considered as a vasomotor neurosis.[1] Eales disease is presumed to be an immunological reaction to an exogenous agent. Hypersensitivity to tuberculoprotein is considered to be related to this disease.[4]

Eales' disease is characterized by retinal phlebitis, peripheral nonperfusion, and retinal neovascularization.

Retinal phlebitis is characterized by vascular sheathing ranging from thin white lines limiting blood column on both sides to heavy exudative sheathing. The involved vessels become obliterative and an avascular area develops in periphery area.

Peripheral non perfusion is characterized by fine white lines representing remains of obliterated vessels (ghost vessels). Retinal neovascularization occurs in 80% of Eale's patients; it

could be on the disc (NVD), elsewhere (NVE). [2] Neovascularization of iris may occur in late stages.

Evaluation includes fundus photograph, fundus fluorescein angiography, optical coherence tomography. Lab investigations include complete blood picture, Erythrocyte sedimentation rate, Mantoux test, FNAC, serology, chest x- ray.

Fundus fluorescein angiography is an important tool in diagnosis. Eale's disease affects predominantly the peripheral retina. Capillary areas of non- perfusion are picked up easily on fundus fluorescein angiography. This exact localization helps in targeted photocoagulation of vessels.[5]

Steroids are the first line and mainstay treatment of inflammatory stages. Subtenon/intravitreal triamcinolone/intravitreal sustained-release dexamethasone implant may be used as adjuvants, especially when macular edema is present due to ocular inflammation. IVTA delivers the desired concentration of the drug without extraocular side effects. IVTA can induce regression of periphlebitis in Eales' disease.[6] Oral prednisolone is given in the dose of 1 mg/kg body weight and is tapered by 5 to 10 mg per week, over a duration of 6-8 weeks. A response to corticosteroids is extremely good in Eale's disease. [1] An empirical anti tubercular treatment should be started in active cases of tuberculosis. Laser photocoagulation, along with anti-VEGF injection, may be required to combat neovascularization in patients with complicated Eales disease.[6] Laser photocoagulation is the treatment of choice in proliferative stage.

Pars plana vitrectomy is indicated in cases of vitreous hemorrhage. Recurrent vitreous haemorrhages may lead to formation of traction bands and membranes in the vitreous and subsequent complications. The main indications for vitrectomy include unresolving vitreous haemorrhage, tractional retinal detachment involving the posterior pole, multiple vitreous membranes. [7]. Visual acuity increases effectively post vitrectomy.

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