

ABSTRACTS

Is Eales' disease due to tuberculosis?

Gupta PN¹, Biswas J²

¹DLF Commander court, Egmore, Chennai, India

²Department of Uvea, SankaraNethralaya, Chennai, Tamil Nadu, India

Abstract

Introduction: Eales' disease, first described by the British ophthalmologist Henry Eales, is characterized by stages of vasculitis, occlusion, and retinal neovascularization. It results in recurrent vitreous hemorrhage leading to vision loss. Multifactorial causes like *Mycobacterium tuberculosis* (TB), human leukocyte antigen, retinal autoimmunity and free radical-mediated damage, have been hypothesized in the etiopathogenesis of this disease.

Materials and methods: A retrospective study was done recruiting patients visiting the uvea clinic with diagnosis of Eales' disease from 2015-2019. Seventy-nine eyes of 50 patients diagnosed as Eales' disease underwent Mantoux test, QuantiFERON-TB Gold test, High resolution computed tomography (HRCT) of the chest and anterior chamber or vitreous tap for TB genome polymerase chain reaction (PCR).

Observations: The study included 41 males and 9 females. The mean age of the patient was 35.62 ± 11.49 years. Forty-two percent (n=21) patients had unilateral involvement. There was one quadrant involvement in 10% eyes, two quadrants in 11% eyes, three quadrants in 19% eyes and four quadrants in 60% eyes. Macular involvement was seen in 33% eyes (n=26), while focal chorioretinitis was seen in 0.02% (n=2) eyes. Mantoux test was positive in 72% patients. QuantiFERON-TB Gold test was positive in 56% patients. HRCT chest was suggestive of pulmonary Koch's' in 34% patients. Out of 4 patients, PCR from anterior chamber tap showed TB genome positive in 33.3% patients (n=2). Out of 9 patients, vitreous tap PCR was positive for TB genome in 22.2% patients (n=2).

Conclusion: The present study suggests a pivotal role of TB as a primary etiology for Eales' disease. The study proposes an association between Eales' disease and *Mycobacterium tuberculosis* infection.

Keywords: *Mycobacterium tuberculosis*, TB, inflammation, Eales' disease

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