Leber’s Multiple Miliary Aneurysm

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In 1912 and 1915, Theodor Leber described a disease with similar vascular findings to Coats but which lacked the massive subretinal exudates described by Coat. This syndrome was later named Leber’s multiple miliary aneurysm disease. In 1915, Leber concluded that what he had described was merely an earlier stage of Coats disease. This conclusion was later reinforced by Reese who described an eye with Leber’s miliary aneurysm that progressed into a clinical case of Coats disease during long term follow up. Most authors today clarify Leber’s disease as an early or non progressive form of Coats. This photoessay describes the classical features.

Fig. 1. (a) Right fundus showing multiple hard exudates in the macular region with the extensive exudation extending into the infero temporal retina and numerous vascular anomalies. (b) Normal left fundus

Fig 3a & b Fundus fluorescein angiography showing multiple miliary aneurysms, intra retinal shunts and nonperfusion areas in the macula and inferotemporal retina in the right eye.

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of Leber’s multiple miliary aneurysm in a 34 year old school teacher.

**Case History:**

A 34 year old female presented in our OPD with complaints of blurring of vision in the right eye of 3 days duration. She had no history of any systemic illness. On examination, her best corrected visual acuity was 6/18, N12 in the right eye and 6/6, N6 in the left eye. Her external eyes were within normal limits. On dilated examination, the right fundus showed multiple hard exudates in the macular region with the extensive exudation extending into the infero temporal retina and numerous vascular anomalies (Fig. 1a) suggestive of Leber’s multiple miliary aneurysm. The left retina was normal (Fig. 1b). A fundus fluorescein angiography showed multiple miliary aneurysms, intra retinal shunts and nonperfusion areas in the macula and infero temporal retina in the right eye (Fig. 2). The left eye
was normal. She underwent a sector laser photocoagulation in the right eye. On review, the vision had improved 6/9, N6 in the right. Fundus was stable with no new lesion (Fig. 3). On review, after 3 months; vision was 6/6, N6 in both eyes. Fundus looked status quo (Fig. 4). On repeat angiogram, more aneurysms were seen (Fig. 5) for which focal laser was repeated. On review after 3 months, her vision and fundus are stable. She has been advised 6 monthly review.

Discussion

Leber's miliary aneurysm is a form of retinal telengectasia. The retinal telengectasia are a group of rare, idiopathic congenital, retinal vascular anomalies characterized by dilation and tortuosity of retinal vessels, formation of multiple aneurysms, varying degrees of leakage and deposition of lipid exudates. Retinal telengectasia always involves the capillary bed, although arteries and venules may also be affected. The vascular malformations frequently progress and may become symptomatic later in life as a result of hemorrhage, oedema or lipid exudation. This condition is not associated with any other systemic or ocular disease.

Leber's is a relatively severe form of telengectasia which usually present in adult life with unilateral impairment of central vision. Fusiform and saccular dilatation of venules and arteries most commonly involving the temporal retinal periphery are seen with chronic leakage resulting in intra retinal hard exudate formation. Fluorescein angiography highlights the vascular anomalies. The treatment is by cryotherapy or photocoagulation to ablate the vascular anomalies.

References