Macular phlebitis in a case of dengue retinopathy

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DESCRIPTION

A 32-year-old woman presented with sudden onset 1 day prior of painless diminution of vision in both eyes. The patient had developed an acute febrile illness a week prior and had been diagnosed with dengue fever (DF) after serological testing was positive. At its nadir, her platelet count had been 30 000/μL. On presentation, she was afebrile, and her platelet count was 60 000/μL.

On ocular examination, the best corrected visual acuity (BCVA) was 20/80 in the right eye and 20/200 in the left eye. The anterior segments and intraocular pressures were normal in both eyes. Fundus examination with slit-lamp biomicroscopy revealed perifoveal haemorrhages with scattered white-coloured exudates in the macula of both eyes (left>>right). Detailed magnified examination showed perivascular exudation surrounding the postcapillary venules of the fovea along with macular oedema of both eyes (left>>>right) (figure 1A, B). The patient was diagnosed with phlebitis secondary to DF.

Fundus fluorescein angiography (FFA) showed hyperfluorescence around minimally tortuous macular venules in the mid-venous phase, which increased and became diffuse in later phases suggesting dye leakage (figure 1C, D). Optical CT (OCT) showed cystoid macular oedema in both eyes (left>right) along with subretinal fluid in the left eye. Central macular thickness was 213 μm in the right eye and 556 μm in the left eye.

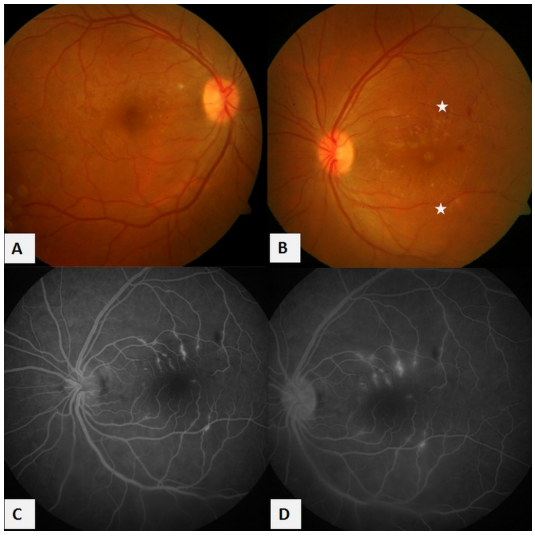

Figure 1 (A,B) Fundus photographs showing perivascular exudation (stars) and retinal haemorrhages in both eyes (LE>>RE). (C,D) Fundus fluorescein angiography images of the LE showing leakage of dye due to phlebitis and minimally tortuous venules. LE, left eye; RE, right eye.

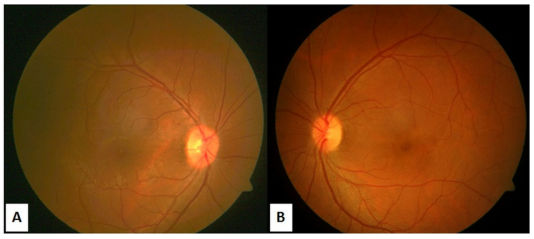

Figure 2 (A, B) Fundus photographs showing resolution of retinopathy in both eyes.

The patient was treated with oral prednisolone (1 mg/kg) in view of severe macular involvement in the left eye. On follow-up at 15 days, the BCVA had improved to 20/40 in the right eye and 20/80 in the left eye, and there was a resolution of macular oedema on OCT. At 1 month of follow-up, BCVA was 20/20 in both eyes, and vascular tortuosity and inflammation had resolved completely (figure 2A, B). The patient did not complain of residual scotomas. During this period, the patient remained stable systemically, and her platelet counts normalised. Her steroid dose was gradually tapered.

Ophthalmic complications of DF include anterior involvement in the form of subconjunctival haemorrhage and uveitis or posterior features like macular oedema, haemorrhages, vascular occlusion and optic neuropathy.[1] Direct infection of tissue and immunocomplex-mediated disease are two possible mechanisms of ocular involvement.[1 2] The latter is the most likely mechanism given the usual delay of 3–5 days for the onset of ocular complications, in parallel with the timeline of serological changes.[1] Vein occlusion and vasculitis are the most common features detected on FFA,[1] while macular oedema has been classified as diffuse, cystoid and cystic foveolitis, the latter having a longer persistence of symptoms.[3] These complications can be managed conservatively, as most of the symptoms and signs regress spontaneously with normalisation of platelet counts, although scotomas can persist. Treatment is recommended only for refractory cases and those with extensive

Learning points

- Dengue fever can result in visual loss due to macular oedema secondary to macular phlebitis.
- Visual prognoses are favourable even without treatment, although extensive macular involvement may be treated with steroids.

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vision-threatening macular complications,[1 2] as seen in the left eye in our patient.

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Competing interests None declared.

Patient consent Obtained.

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