Spontaneous closure of macular hole in a case of toxoplasma retinochoroiditis

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Key words: Intravitreal clindamycin, macular hole, spontaneous closure, toxoplasma retinochoroiditis

A 34-year-old male came with complaints of reduced vision in the left eye since 4 days. On examination his best corrected vision acuity was 20/20, N6 in the right eye and 20/125, N12 in the left eye. While his right eye ocular examination was normal, the left eye anterior chamber and vitreous cavity showed cells 1+ with a 1-disc diameter full thickness patch of retinitis at the inferior aspect of macula adjacent to a pigmented chorioretinal scar [Figs. 1a and 2a]. Based on these findings, a clinical diagnosis of left eye toxoplasma retinochoroiditis was made and patient was started on the combination tablet of sulphamethoxazole and trimethoprim (800 mg/160 mg) with oral prednisolone (1 mg/kg) added on the following day. As the lesion was very close to the fovea, the patient also received a single dose of intravitreal clindamycin 1 mg/0.1 ml along with dexamethasone 400 microgm/0.1 ml.

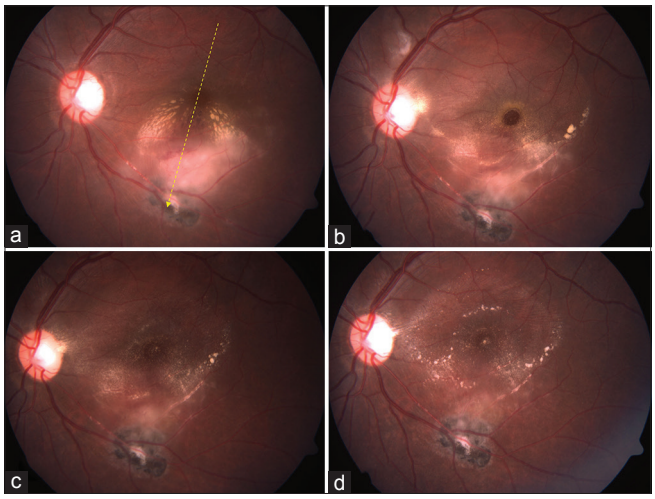

Figure 1: (a) Left eye fundus photo shows a full thickness retinitis patch inferior to the fovea and adjacent to a pigmented chorioretinal scar. Associated Kyrelies vascular plaques with intraretinal hemorrhages and hard exudates in an incomplete inferior macular star pattern are seen. (b) One week following the intravitreal injections, a full thickness macular hole is seen with partial resolution of the hard exudates and retinitis. (c and d) At 1 and 3 weeks following macular hole formation, spontaneous closure of the macular hole is seen with resolving hard exudates and retinitis

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At the one week review, the vision dropped to counting fingers (CF) at 1 meter with the fundus showing resolving retinitis and a 1/4th disc diameter full thickness macula hole (MH) confirmed on OCT scan [Figs. 1b and 2b]. Fundus fluorescein angiography done at this visit did not show evidence of macular ischemia [Fig. 3]. Patient serum tested positive for IgG *Toxoplasma gondi* and negative for IgM *Toxoplasma gondi.*

One week following the occurrence of the MH, though the vision remained CF at 1 meter, there was spontaneous closure of the MH seen [Figs. 1c and 2c]. At this stage, as the inflammation because of the retinitis had almost resolved, the oral steroids were stopped and antimicrobial agents continued

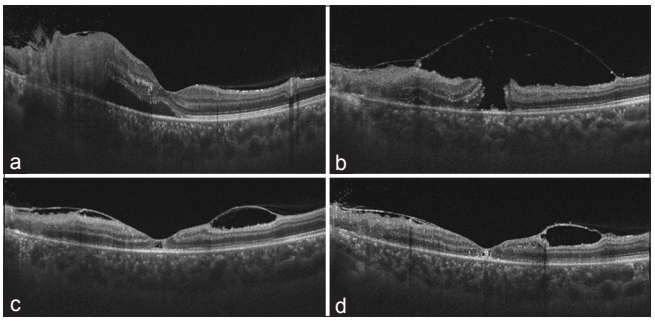

Figure 2: (a) OCT scan of the left eye macula at presentation (passing via the yellow dotted line in Fig. 1a) shows hyper-reflective dots in an attached posterior hyaloid, retinal thickening with distortion of architecture at site of retinitis, hyper-reflective dots in the retina and a neurosensory detachment. (b) One week following intravitreal injections, the follow-up scan shows a localized thickened posterior hyaloid detachment in a dome shaped manner above the fovea with vitreoretinal adhesion at the site of retinitis, hyper-reflective dots under the detached hyaloid and a full thickness macular hole. (c and d) 1 and 3 weeks following macular hole formation, the follow-up OCT scans show collapse of the central posterior hyaloid under which the macular hole has closed with persistence of a ring of detached posterior hyaloid around the fovea

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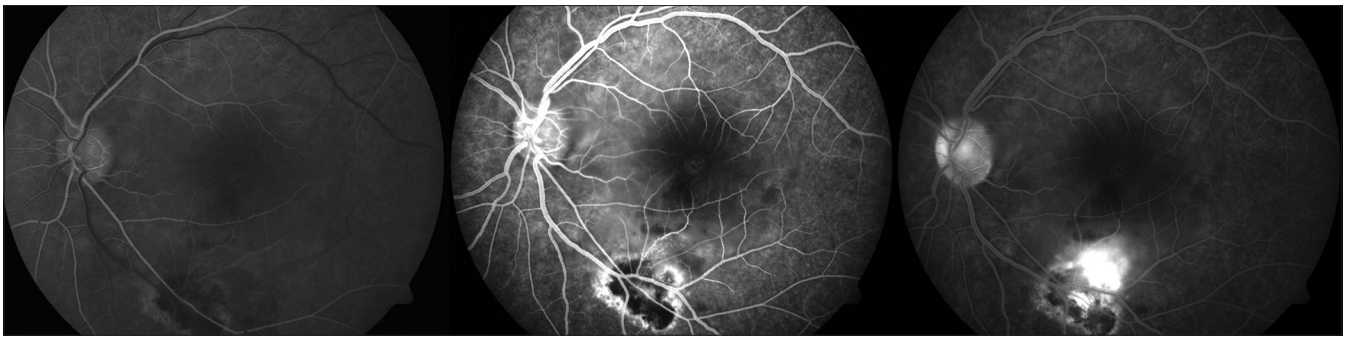

Figure 3: Fundus fluorescein angiography of the left eye done at 1 week following the intravitreal injections shows a well perfused macula, blocked choroidal fluorescence at the chorioretinal scar, leakage at the site of retinitis and window defects at the base of the macular hole

for a total of 6 weeks. At the end of 4 weeks the visual acuity remained stable at CF 1 meter, retinitis resolved and the MH remained closed [Figs. 1d and 2d].

Discussion

We hypothesize that there was a limited separation of the posterior hyaloid above the fovea after the intravitreal injections which may be the reason for development of the MH [Fig. 2b].[1-3] Also, a possible vitreous incarceration at the site of intravitreal injection might have aggravated the posterior hyaloid separation and subsequent MH formation.[4] The strong vitreoretinal adhesion at site of active retinitis might have prevented this hyaloid detachment from progressing, further causing its collapse and formation of a scaffold over which the macular hole closed.[5]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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