Secondary choroidal neovascular membrane in a case of torpedo maculopathy

Manoj Soman[1,2], Asmita Indurkar[1], Ashwin Mohan[1,2], Unnikrishnan Nair[1,2]

Key words: CNVM, multimodal, OCTA, torpedo

Torpedo maculopathy was first described by Roseman and Gass[1] as a benign congenital solitary, sharply circumscribed, pinkish-white, placoid, hypopigmented naevus of the RPE not associated with a significant visual loss which can be detected on routine clinical evaluation. It resembles a torpedo with a characteristic leading edge pointing toward the fovea.[2] Torpedo maculopathy by itself is an uncommon entity and is a benign condition though very rarely it can be associated with complications.[3,4] We report a fourth such case of torpedo maculopathy associated with choroidal neovascular membrane (CNVM) treated with anti-VEGF therapy.

A young 14-year-old male presented with right eye diminution of vision, 6 months in duration with a history of two intravitreal ranibizumab injections over the last 2 months and an unremarkable systemic history. The right eye had a corrected distance visual acuity of 6/9 and a relative afferent pupillary defect, and an otherwise normal anterior segment exam. The left eye exam was normal. Figs. 1-3 document and describe the color fundus photo, angiography, and optical coherence tomography findings (SD-OCT [Spectral Domain Optical Coherence Tomography], Spectralis, Heidelberg, Germany). As the CNVM was active, he was advised further intravitreal anti-VEGF injections.

Discussion

This case of torpedo maculopathy with CNVM is the youngest report yet; additionally it also details the neovascular elements with OCT Angiography (OCTA) making it unique. The CNVM was a mixed type with a poor response to two prior anti-VEGF injections unlike the previous report where the exact nature of CNVM is not mentioned and a good anatomical response was recorded with a single injection.[3] In conclusion, we highlight the fact that torpedo maculopathy lesions are susceptible to the development of CNVM possibly because the outer retina and RPE are primarily affected by this entity, thereby emphasizing the need for periodic follow-up of these young patients.

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.

Financial support and sponsorship

Nil.

Access this article online

Quick Response Code:

Website: www.ijo.in

DOI: 10.4103/ijo.IJO_468_20

[1]Department of Vitreo-retina, Chaithanya Eye Hospital and Research Institute, [2]CITE, Trivandrum, Kerala, India

Correspondence to: Dr. Ashwin Mohan, Chaithanya Eye Hospital and Research Institute, Trivandrum, Kerala, India. E-mail: research@chaithanya.org

Received: 06-Mar-2020 Revision: 15-Apr-2020
Accepted: 18-Jun-2020 Published: 26-Oct-2020

Cite this article as: Soman M, Indurkar A, Mohan A, Nair U. Secondary choroidal neovascular membrane in a case of torpedo maculopathy. Indian J Ophthalmol 2020;68:2499-500.

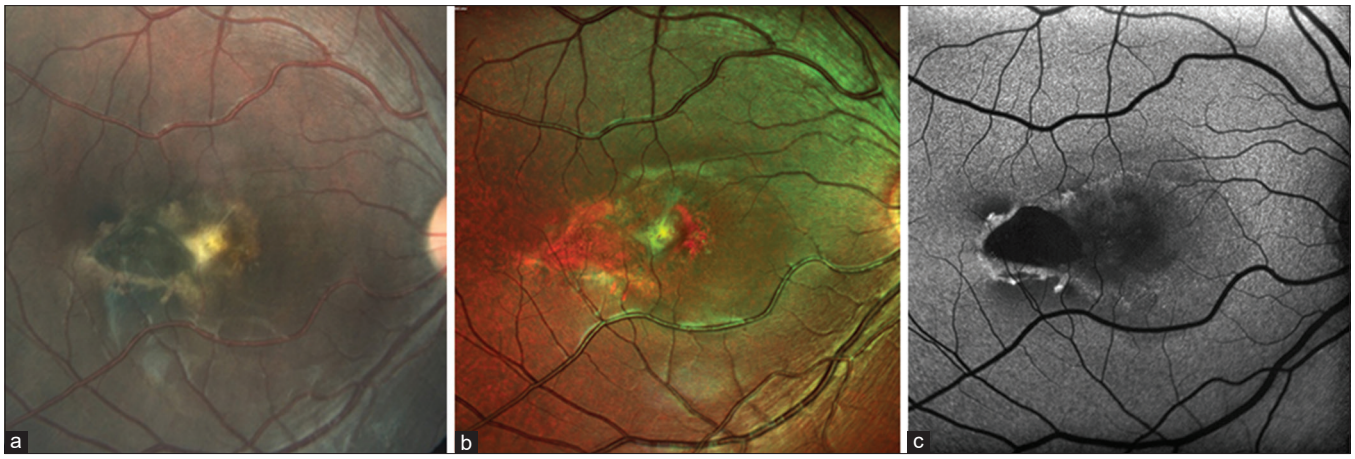

Figure 1: (a) A flat, fusiform hypopigmented lesion of 1905 × 1138 μm with well-defined margins containing a smaller subfoveal grayish-white lesion within it in the fundus suggestive of a type 1 torpedo lesion. (b) Multicolor image and (c) blue autofluorescence image better defining the lesion

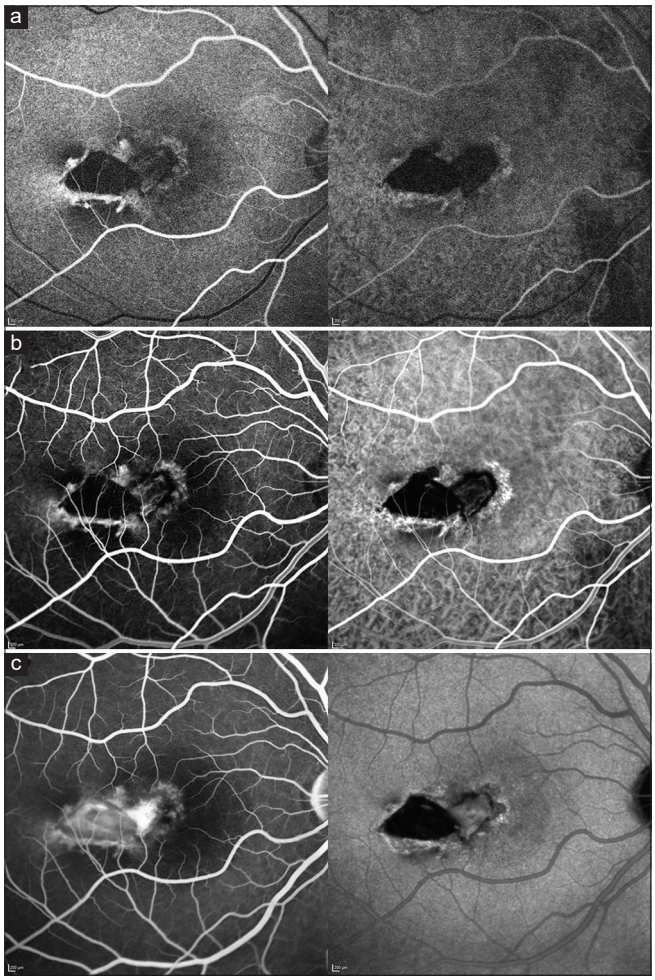

Figure 2: (a) Early phase, (b) peak phase, and (c) late phase fundus fluorescein angiography (FFA) and indocyanine green angiography (ICG) showing the lesions. Early stippled hyperfluorescence increasing in size and intensity was noted corresponding to the CNVM on FFA and well defined neovascular network seen on ICG. Early hypofluorescence with late staining on FFA and persistent hypofluorescence on ICG were seen corresponding to the torpedo lesion

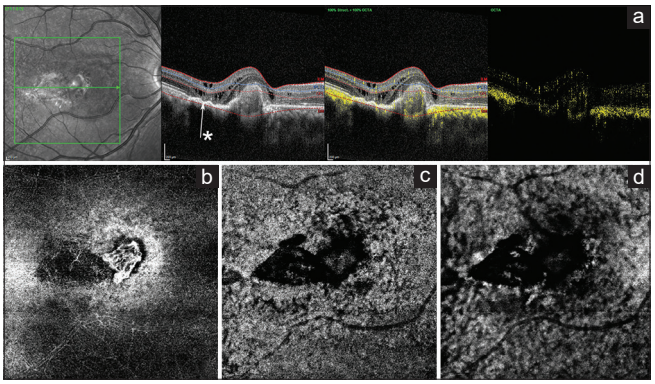

Figure 3: (a) SD-OCT with an altered foveal contour, intraretinal cystic spaces, loss of outer retinal layers, subretinal hyperreflective material (HRM), and a pigment epithelial detachment with HRM suggestive of a combined type 1 and 2 choroidal neovascular membrane (CNVM) in the right eye. Star (*) with arrow indicates thinned out ellipsoid and retinal pigment epithelium (RPE) with the absence of excavation of outer retina or choroid. OCT angiography flow signals can be seen in the area of the CNVM. (b) Avascular retina slab showing the vascular network and (c) choriocapillaris and (d) choroidal slab showing absence of flow

Conflicts of interest

There are no conflicts of interest.

References

1. Roseman RL, Gass JD. Solitary hypopigmented nevus of the retinal pigment epithelium in the macula. Arch Ophthalmol 1992;110:1358-9.
2. Golchet PR, Jampol LM, Mathura JR Jr, Daily MJ. Torpedo maculopathy. Br J Ophthalmol 2010;94:302-6.
3. Shirley K, O'Neill M, Gamble R, Ramsey A, McLoone E. Torpedo maculopathy: Disease spectrum and associated choroidal neovascularisation in a paediatric population. Eye (Lond) 2018;32:1315-20.
4. Jurjevic D, Böni C, Barthelmes D, Fasler K, Becker M, Michels S, *et al*. Torpedo maculopathy associated with choroidal neovascularization. Klin Monbl Augenheilkd 2017;234:508-14.