Commentary: Internal limiting membrane sparing in necrotizing focal retinitis

Necrotizing focal retinitis is a vision-threatening condition which can lead to fulminant loss of vision if not managed promptly. The etiology for the same can be either infective or autoimmune, with infective causes forming the major chunk of the cases in India.[1] With the advent of high-resolution optical coherence tomography (OCT), newer insights are being provided into the pattern and extent of retinal involvement in various causes of retinitis. In the current issue, Babu *et al*. presents a case of acquired toxoplasma retinitis with serial OCT documentation of the course of retinitis.[2] They describe the findings of "bridge sign" on OCT in toxoplasma retinitis. The "bridge" is essentially the spared internal limiting membrane (ILM) in the area of the full thickness retinitis "bridging" between the surrounding healthy retinas.

While being well-documented, this finding of ILM sparing is not unique to toxoplasma retinitis. It has been characteristically described in retinitis associated with subacute sclerosing panencephalitis (SSPE).[3] The classic presentation in SSPE is bilateral sequential involvement of the posterior pole with rapid necrolysis of the neurosensory retina and sparing of the ILM. The quantum and rapidity of visual loss is often striking and is rarely seen in any other form of posterior necrotizing focal retinitis. Viral retinitis, secondary to herpes viruses like varicella-zoster virus (VZV), herpes simplex virus (HSV), and cytomegalovirus (CMV) may also present with a similar finding of full-thickness retinitis with progressive loss of retinal layers and sparing of the ILM.[1,4] The ILM has been postulated as the third retinal barrier after the tight junctions of the retinal pigment epithelium (RPE) and the retinal capillaries.[5] This could be a possible explanation of the sparing of the ILM and limiting of the necrosis to the retina. In the natural course, the ILM bridge eventually crumbles over the retinal pigment epithelium leading to complete effacement of the retinal architecture.

In conclusion, ILM sparing on OCT is essentially a sign of rapidly progressive, full-thickness necrotizing retinitis. Its presence should prompt us to think in terms of infective etiology and tailored investigations should be ordered to rule out SSPE, toxoplasmosis, and herpes viruses like HSV, VZV, and CMV.

Mohit Dogra, Simar Rajan Singh

Advanced Eye Centre, Department of Ophthalmology, Post Graduate Institute of Medical Education and Research, Chandigarh, India

Correspondence to: Dr. Mohit Dogra, Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh - 160 012, India.
E-mail: mohit_dogra_29@hotmail.com

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