Commentary: Available evidence on early treatment of central serous chorioretinopathy

Early treatment of acute central serous chorioretinopathy (CSCR) using the subthreshold green laser (532 nm) was noted to accelerate the resolution of subretinal fluid (SRF) on optical coherence tomography (OCT) and yield better contrast sensitivity (CS) and multifocal electroretinogram (mfERG) in an interesting study in this issue of the *Indian Journal of Ophthalmology* (*IJO*).[1]

It is a well-known fact that acute CSCR is a self-limiting disease with SRF resolving within 3 to 4 months of onset in most of the cases (around 80%–90%) with most cases achieving premorbid best-corrected visual acuity (BCVA).[2] Thus, observation during this period is the current standard approach for such cases.[2,3]

The standard textbook indications for active treatment of CSCR include the following:[2]

- Nonresolution of SRF in 3 to 4 months
- Recurrent disease in an eye with visual compromise due to the previous episode (s)
- Permanent loss of BCVA in the fellow eye due to CSCR
- Chronic CSCR/diffuse retinal pigment epitheliopathy (DRPE), and
- Occupational/professional need for early visual recovery or stereopsis.

However, even after anatomical resolution of SRF, multiple anatomical and functional deficits may persist with poor or no recovery with time in some patients. The long duration of SRF is an important factor for poor anatomical and functional outcomes.[4] Ooto and coworkers noted that resolved CSCR cases had lower cone density on adaptive optics scanning laser ophthalmoscopy compared with normal controls.[5] Two patterns of cone mosaic were noted. Irregular mosaic with large dark regions (Group 2) was associated with worse BCVA and lower cone density compared with the group (Group 1) with regular mosaic and small dark spots. However, around 81% of Group 1 eyes and 17% of Group 2 eyes had a BCVA of at least 20/20.[5] It is well-known that self-resolved CSCR cases may have thinning of the outer retinal layer (distance between internal limiting membrane [ILM] and retinal pigment epithelium [RPE] minus the distance between ILM to inner plexiform layer), thinning of outer nuclear layer, defect in the external limiting membrane (ELM), abnormality or defect in the ellipsoid zone (inner segment–outer segment junction), disrupted cone outer segment tip line, irregularity of the RPE, or foveal thinning in OCT. OCT angiography may show reduced choriocapillaris vessel density in resolved CSCR. Functional deficits after spontaneous resolution of CSCR include suboptimal visual acuity, reduced CS, mildly deranged color vision, faint scotoma, mild metamorphopsia, visual field abnormalities, microperimetry deficits,[6] and suboptimal mfERG response.[1,7]

Reduction or avoidance of risk factors, including steroids and stress, is an important part of the management of acute CSCR. Acute CSCR has been treated with topical nepafenac (0.1%) thrice daily with a higher rate of resolution of SRF and better final BCVA at 6 months compared with observation. Odrobina and colleagues (J Ophthalmol. 2013; 2013: 361513) noted that green laser 532 nm in acute CSCR (<6-month duration) resulted in no cases with SRF and no photoreceptor defects compared with 12.5% and 93% cases with chronic CSCR, respectively, at 12 months follow-up. Spironolactone (oral 40 mg twice daily) and eplerenone (25 mg/day for 1 week followed by 50 mg/day for 11 weeks) was noted to cause faster resolution of SRF. Other options for management of acute CSCR include subthreshold diode micropulse laser 810 nm, anti–*Helicobacter pylori* treatment,[8] half-fluence or half dose photodynamic therapy, subthreshold micropulse yellow laser 577 nm, and antivascular endothelial growth factor agents (ranibizumab and bevacizumab).[4]

We congratulate the authors for their recent work on the early treatment of acute CSCR using the subthreshold green laser in which they demonstrated more rapid resolution of SRF and superior functional outcomes as evidenced by CS and

mfERG.[1] Since CSCR is a disease of the young and a better vision will improve the professional quality of life of these young patients, early intervention in CSCR is gaining more popularity to minimize permanent anatomical and functional compromise of the macula.

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Quick Response Code:

Website: www.ijo.in

DOI: 10.4103/ijo.IJO_809_21

Cite this article as: Tripathy K, Mishra C, Addya S. Commentary: Available evidence on early treatment of central serous chorioretinopathy. Indian J Ophthalmol 2021;69:2348-9.