Resolution of Central Serous Chorioretinopathy (CSCR) with the use of topical Non-Steroidal Anti-Inflammatory (NSAIDs).

Abstract
Currently there is no standard treatment for CSCR. Treating acute cases with topical NSAIDs has proven to have a beneficial effect on best-corrected visual acuity as well as complete fluid reabsorption.

Case History
- 49 year old white male
- Complaining of dim blurry vision in his left eye beginning six days prior
- The patient currently taking oral prednisolone for asthma and seasonal allergies.
- The patient reported having a stressful work environment.

Pertinent findings
- BCVA was 20/20 OD and 20/70 OS with no improvement on pinhole.
- Amsler grid testing was reported as normal but slightly dim OS.
- Red cap desaturation was performed with the left eye manifesting a significant decrease in color saturation as compared to the right eye.
- Slit lamp examination- serous elevation of the neurosensory retina extending from the macula to the optic nerve OS and several small pigment epithelial detachments (PEDs) were found temporal to the macula OD
- OCT findings- neurosensory detachment OS and multiple PEDs OD.

Differential diagnosis
- Primary differential: CSCR
- Other differentials: macular degeneration, polypoidal choroidal vasculopathy, optic nerve head pit, tumors of choroid, and inflammatory conditions such as lyme or sarcoid.

Diagnosis and discussion
- CSCR OS
- This condition presents with a serous neurosensory detachment of the retina.
- A major cause of this condition is the use of steroids. Corticosteroids elevate the circulating cortisol levels, which increases capillary fragility and causes the diffusion of fluid into the sub RPE space.²
- Patient was taking oral prednisolone.
- CSCR usually spontaneously resolves over several months; however, there is the possibility that there may be some degree of vision loss, which is attributed to the disruption of retinal layers. Therefore, treatment with topical NSAIDs may be indicated in order to prevent these retinal changes from occurring.

Treatment, management
- Studies show that intervention with topical NSAIDs leads to visual improvement and resorption of subretinal fluid in most patients studied\(^1\).
- Damage to the RPE is postulated to be mediated by an inflammatory process, which is why topical NSAIDS have been indicated for treatment\(^2\).
- Studies show that six months following therapy with nepfanac, complete resolution of macular subretinal fluid was observed in 14 out of 17 eyes in the treatment group and 6 of 14 eyes in the control group. The treatment group had a significant difference in their best-corrected vision versus the control group who did not illustrate a significant change throughout the follow up period\(^1\).
- Prescribed the patient with Ketorolac OS QID
- The patient returned to clinic six weeks later reporting better, more clear vision in the left eye. Entering visual acuities were 20/20 OD and 20/30 OS. Fundus exam showed complete resolution of subretinal fluid OS with persisting PEDs temporal to macula OD. OCT was performed once again, confirming the resorption of fluid OS and the presence of PED’s OD.
- The patient was directed to continue use of Ketorolac OS QID and return to clinic in two months for a dilated exam.

**Conclusion**

Because CSCR is a self-limiting condition, many practitioners may choose to monitor the course of the disease without any medical intervention. Studies have shown complete resolution of subretinal fluid and better visual outcomes with the use of these drugs. Topical anti-inflammatories are safe drugs with minimal side effects, and a great less invasive option for symptomatic patients with acute CSCR.

**Bibliography**