

Central Serous Chorioretinopathy Following Strabismus Surgery

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Abstract

Central serous chorioretinopathy (CSCR) has been reported to occur after various kinds of intraocular surgery. We discuss a case of CSCR occurring in a 38-year male after an uneventful strabismus surgery. We aim to increase awareness about such a complication after strabismus surgery along with the possible hypothesis.

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Case Report

Central serous chorioretinopathy (CSCR) has been reported to occur after various kinds of intraocular surgery including dacryocystorhinostomy¹, trabeculectomy², refractive surgery³ and laser photocoagulation.⁴ CSCR after strabismus surgery is indeed a very rare complication.⁵ We would like to share briefly about a clinical case that we came across who developed CSCR after strabismus surgery.

A 38-year male underwent an uneventful horizontal strabismus surgery in the left eye for a residual exotropia measuring 35 PD on adjustable sutures. The patient had a history of strabismus surgery in the right eye one year back. His preoperative visual acuity was 20/40 OU and preoperative fundus examination in both eyes was normal. There was no history of previous episode of CSCR. The patient received combination moxifloxacin/dexamethasone eyedrops 3 times daily for one week after surgery which were gradually tapered. He presented one week later with decreased visual acuity OS. On examination, visual acuity was 20/200 and there was a central pigment epithelial defect with neurosensory detachment at the fovea confirmed on Optical Coherence Tomography imaging (Figure 1). Topical steroids were stopped; no intervention was done and the fluid resolved over a subsequent period of 8 weeks.

Amongst the various reports of CSCR following ocular surgery; known risk factors for CSCR include type A personality and corticosteroid elevation, either endogenously or through exogenous corticosteroid use.⁶ The

primary pathology in CSCR is a disorder of the choroidal circulation.⁶ Elevated cortisol levels from the emotional stress combined with topical corticosteroids are the biggest factors playing a role in the development of CSCR.⁵ Moreover, the compression of vortex veins in transposition surgeries could be an accessory factor. CSCR is not an inflammatory disease^{7,8} but pain may increase the rate of reactive oxygen species production, which might be the possible hand in increasing vascular permeability, hence increasing chances of CSCR in cases of severe postoperative pain.⁹ A potential small eye can also predispose the patient to CSCR, hence axial length of the patient should be noted in a case of CSCR after ocular surgery.²

We would also like to point out that the age of the patient is a very crucial factor. Almost all the cases described with CSCR after ocular surgery or intervention occurred in the 4th or 5th decade of life. When we encounter older patients in early postoperative period with a disease like CSCR that is known to affect younger males, it may trigger our thought process to the above-mentioned factors as potential causal elements. Nevertheless, we may observe such a case without intervention and try to remove any risk factor if encountered. Since there is a paucity of literature on such cases and their treatment; we hypothesize that treatment in cases of non-resolution can be undertaken as other cases of CSCR.

We wish to stimulate urge and caution towards this relatively rare complication after strabismus surgery. CSCR can occur even in the absence of other factors; hence all the factors

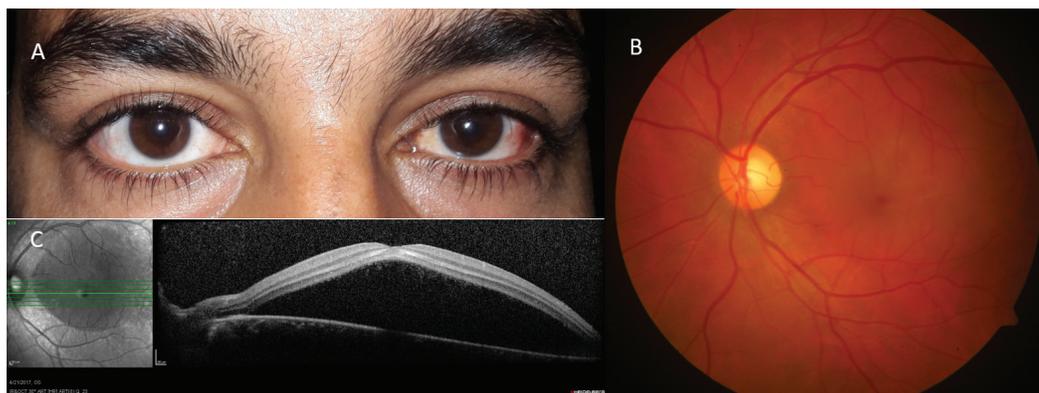


Figure 1: (A): Clinical photograph of the patient at the third week of postoperative visit. (B): Fundus picture of the left eye with pigment epithelial defect. (C): Optical Coherence Tomography image of the left eye showing a large neurosensory detachment at the macula.

mentioned can be blamed; but the possibility of CSCR occurring as an isolated idiopathic event may not always be ruled out.

References

1. Sorenson R, Soni A. Central serous chorioretinopathy following medial transposition of split lateral rectus muscle for complete oculomotor nerve palsy. *J AAPOS* 2017; 21:161-162
2. Mondal L, Basu S, Baidya K, Bhaduri G. Central serous chorioretinopathy after dacryocystorhinostomy operation on the same side. *Indian J Ophthalmol* 2009; 57:57-8.
3. Takakura A, Haug SJ, Radhakrishnan S, Fu AD, Jumper JM, MacDonald HR, et al. Central serous chorioretinopathy after trabeculectomy in a patient with microphthalmos and congenital rubella syndrome. *Retin Cases Brief Rep*. 2014; 8:153-6
4. Moshirfar M, Hsu M, Schulman J, Armenia J, Sikder S, Hartnett ME. The incidence of central serous chorioretinopathy after photorefractive keratectomy and laser in situ keratomileusis. *J Ophthalmol* 2012; 2012:904215
5. Semeraro F, Russo A, Delcassi L, Costagliola C. Recurrent central serous chorioretinopathy after peripheral retinal laser photocoagulation: a case report. *Eur J Ophthalmol* 2013; 23:258-61.
6. Liew G, Quin G, Gillies M, Fraser-Bell S. Central serous chorioretinopathy: a review of epidemiology and pathophysiology. *Clin Exp Ophthalmol* 2013; 41:201-14.
7. McHugh JM, McHugh WB. Pain: neuroanatomy, chemical mediators, and clinical implications. *AACN Clin Issues* 2000; 11:168-78.
8. Amaya F, Izumi Y, Matsuda M, Sasaki M. Tissue Injury and Related Mediators of Pain Exacerbation. *Curr Neuropharmacol* 2013; 11:592-597.
9. Dray A. Inflammatory mediators of pain. *Br J Anaesth* 1995; 75:125-31.

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