Natural course of central serous chorioretinopathy in patient on systemic corticosteroids for uveitis

Dr. S. Natarajan DO, FRVS, M.A.B.M.S, M.O.R.C.E, F.A.B.M.S.
Dr. Amol P. Mhatre, M.S (Ophthalmology).
Dr. Saumil Sheth, M.S (Ophthalmology), D.N.B, F.C.P.S ,D.O.M.S, ICO(UK).
Dr. Dharmesh Kar, D.N.B.(Ophthalmology)., F.V.R.S
Dr. Kanupriya Mhatre, M.S (Ophthalmology).
Dr. Syed Asghar Hussain, DO, M.S (Ophthalmology).
Aditya Jyot Eye Hospital

Keywords: Central serous chorio-retinopathy, low-dose steroids, uveitis

Summary

37-year-old presented with metamorphopsia in right eye with BCVA 20/60 and CSCR, confirmed on OCT and FFA. He was on 5 mg oral prednisolone daily since 4 weeks for intermediate uveitis.1 month after discontinuation of steroids, CSCR resolved. Patients on even low maintenance doses of systemic steroids can develop CSCR and thus need to be cautioned.

Abstract

Purpose: To report a rare case of CSCR developing in a patient even with low dose systemic steroids. Methods: A 37-year-old patient presented with metamorphopsia and blurring of vision in the right eye, while on a daily maintenance dose of 5 mg oral prednisolone since last 4 weeks for intermediate uveitis in both eyes. Right eye showed unaided visual acuity of 20/60 with subfoveal area of central serous chorioretinopathy (CSCR). Fourier domain OCT and FFA confirmed the same. 1 month after the discontinuation of oral steroids, CSCR resolved clinically and on OCT, with visual acuity improving to 20/20 in right eye. Conclusion: Though systemic high dose steroids have been implicated in pathogenesis of CSCR for long, even patients on low maintenance doses of systemic steroids need to be cautioned and reviewed regularly for the same.

Introduction

Corticosteroid use is one of the common causes of CSCR. One of the most popular etiologies proposed is that steroid use leads to decreased subretinal absorption by altering the permeability of the choriocapillary complex and the ion transport mechanisms at the mineralocorticoid level.1,2 There are currently reports in the literature on high dose or chronic steroid use for the treatment of giant cell arteritis, asthma, thyroid orbitopathy, and other diseases, leading to CSCR.3,4 We are hereby reporting a rare case of patient with chronic intermediate uveitis developing CSCR in the right eye, even with low dose systemic steroid usage. Omission of steroids led to complete resolution of the condition.

Case Report

A 37-year-old man presented to us with complaint of metamorphopsia and blurring of vision in the right eye since 2 days. 10 weeks back, he was started on oral prednisolone 1 mg/kg daily in weekly tapering doses for intermediate uveitis in both eyes, and was on a daily maintenance dose of 5 mg since last 4 weeks. His visual acuity was 20/20 in both eyes in all previous weekly visits

with normal posterior pole. He had no significant medical history. At this presentation, his unaided visual acuity was 20/60 and 20/20 in the right and the left eyes respectively. Anterior segment was unremarkable with normal pupillary size and reaction. Both eyes showed few anterior vitreous cells. Intraocular pressure was within normal range in both eyes. Dilated fundus examination demonstrated subfoveal area of central serous chorioretinopathy (CSCR), in the right eye (Fig.1a) and mild grade vitreous haze in both eyes. FFA in the right eye showed juxtafoveal leak (Fig. 1b). Fourier domain OCT revealed subfoveal neurosensory detachment in right eye (Fig.2a) and was normal for the left eye.

We discontinued oral prednisolone and followed up the patient. After 1 month, the area of CSCR resolved clinically and on OCT (Fig.2b), with his visual acuity improving to 20/20 in right eye. No signs of active uveitis were noticed in any eye.

Discussion

Carvalho-Recchia et al.5 were the first to report a prospective study exhibiting a statistically significant difference in the development of CSCR with exogenous corticosteroid use. As suggested by Levy et al.,4 the proportion of patients developing CSCR while on corticosteroids worldwide is quite limited, and most cases develop the condition unilaterally, even when on systemic therapy. They suggest that local eye conditions play a central role in the development of CSCR. Fawzi et al.6 (2001) reported a case of CSCR associated with bone marrow transplantation in a hypertensive man receiving high-dose prednisone at 60 mg/day in addition to immunosuppressants.

In previous reported cases of CSCR in ocular inflammatory conditions, the condition has been reported to have developed following chronic or high-dose use of systemic corticosteroids7. This case reported is unique

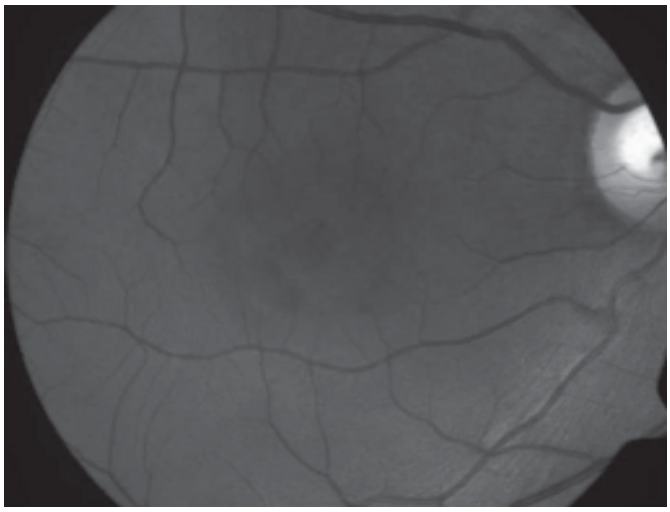


Fig. 1a) Red-free photograph and 1b) fluorescein angiogram of the right eye demonstrating central serous chorioretinopathy and corresponding focus of leakage.

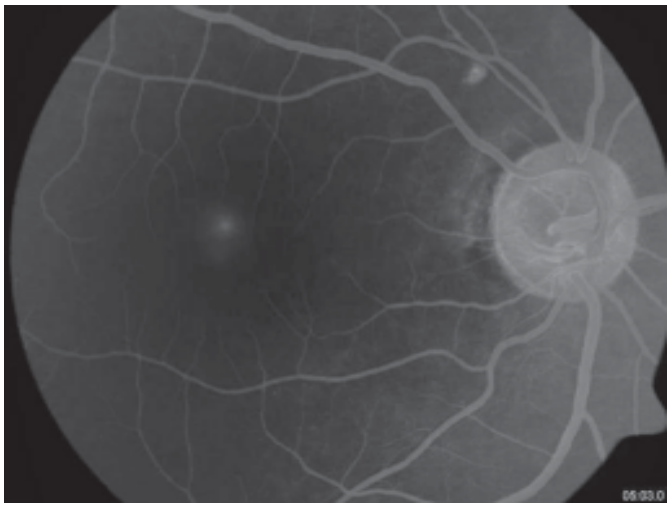
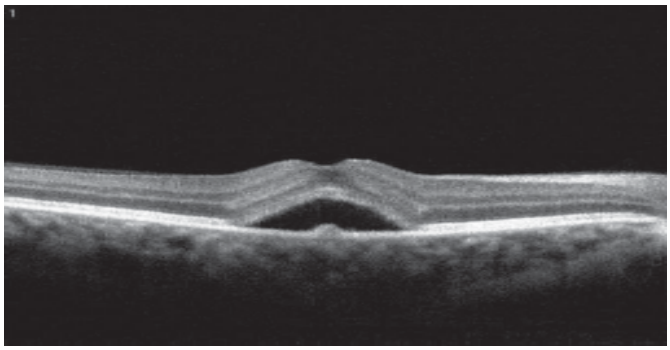


Fig.2 Fourier Domain Optical coherence tomography of the right eye demonstrating



2a) subfoveal neurosensory detachment and 2b) resolved CSCR 1 month later.

in its presentation as it demonstrates the occurrence of CSCR, 4 weeks after prednisolone was tapered down to 5 mg daily.

The universally recommended treatment of CSCR has been to discontinue or to taper down the dosage of steroids for retinal reattachment. If this is not possible, it has been recommended that a steroid-sparing immunosuppressive agent be substituted or that early laser treatment for the retinal pigment epithelium leakage be considered.8 Our patient responded positively with discontinuation of oral steroids.

The potentially deleterious effects of corticosteroids, favoring CSCR, are well-known. Patients on steroids for chronic systemic inflammatory disorders may present to an ophthalmologist with a clinical and angiographic evolution compatible with CSCR. At the same time, this should be borne in mind by the ophthalmologists themselves while managing a chronic uveitis patient with low dose corticosteroids. Indiscriminate or prolonged usage of even low dose steroid should be discontinued as soon as possible, rather than putting these patients on long term follow ups.

❑❑❑