Idiopathic Central Serous Retinopathy With Bullous Retinal Detachment

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Classically Central Serous Retinopathy presents as a round or oval serous detachment of the retina at the macula that is localised and well delineated from the surrounding normal retina. The detachment invariably involves the fovea, and may rarely be outside the macula. The fluid under the sensory retina may be clear or turbid, and may sometimes contain protein deposits, or fibrinous exudates. More than one such localised detachment may be occasionally found in different areas of the same fundus, and could be located peripherally as well. The sensory detachment may sometimes be extensive and bullous, with shifting subretinal fluid that may extend to the fundus periphery. Eyes with fibrin in the subretinal space or eyes with extensive detachments may develop subretinal fibrosis. Serous detachments of the retinal pigment epithelium (RPE) may often be found in eyes with localised or extensive retinal detachments. These appear as smooth, round or oval, dome-like elevations of the RPE with clear fluid and distinct margins. RPE detachments are usually around \( \frac{1}{4} \) disc diameter in size, but can be much larger. They may be found within the area of serous retinal elevation, at its border, or outside it. RPE tears and choroidal neovascularisation are rare in ICSC, but have been described. It is also important not to over look a congenital pit of the optic nerve head that may be associated with a serous detachment of the macula. When ICSC resolves or becomes chronic, there may be alterations in the fundus such as RPE atrophy in different patterns, RPE hyperpigmentation, subretinal yellow deposits, or retinal neovascularisation. An atrophic tract in the RPE might be noticed in eyes after absorption of fluid that had gravitated inferiorly from the macula. While acute ICSC may not pose a problem in diagnosis, the chronic stages can be easily misdiagnosed unless one is familiar with the fundus changes associated with it. ICSC may sometimes be bilateral with symptoms developing days or weeks apart in each eye. Fellow eyes may be normal, may show localised serous detachments of the retina away from the fovea, RPE detachments, or evidence of previous ICSC.

The natural course of ICSC is favourable in most patients, with resolution of the serous detachment and return of visual activity, with sustained long-term visual gain. About 5 % will be left with a visual acuity of less than 6/9, 20 to 50 % will have one or more recurrences, with most recurrences occurring within one year, and about 20 % can develop ICSC in the other eye. Recurrences were most often seen within one disc diameter of the original site of fluorescein leakage. Eyes with serous bullous detachments can also reattach spontaneously with recovery of vision. In spite of clinical resolution and improvement in visual acuity, other tests of macular function determined by Amsler’s grid, visual field charting, colour vision testing, contrast sensitivity determination, multifocal electroretinograms, and electro-oculograms could be abnormal. Morphological changes in the retinal pigment epithelium such as pigment epithelial atrophy, and hyperpigmentation may be seen in eyes after resolution of the serous detachment. These areas of atrophy may be located

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within, or even outside the area of serous detachments that had resolved. Serous pigment epithelial detachments associated with ICSC in younger patients can spontaneously flatten and show some pigmentation, without the development of geographic atrophy or choroidal neovascularisation. Hyperfluorescence on the ICG, and foveal thinning on the OCT may be evident long after the sensory detachment subsides.

We present a case of central serous retinopathy with atypical features in an young patient who gave a history of chronic use of a steroid skin cream for allergic dermatitis.

Spontaneous resolution on conservative treatment was slow and took place over a period of 3 months. The patient was weaned off steroids and an emollient cream was given for local application. Although the resolution was dramatic, it was not accompanied by a corresponding increase in visual acuity.

Management

Patients with ICSC can be reassured and observed because of the favourable natural outcome that has been consistently documented. In patients taking steroid for an ocular problem, the drug may be tapered off and stopped if there are clear indications that it is not necessary. In patients taking steroids for other medical conditions, a careful consideration of the reason for steroid intake must be made, and any plans to reduce the dosage or withdraw the steroid must be made in consultation with the patient’s physician. There may be patients with systemic disorders who need the drug for prolonged periods. There is no proved medication for ICSC at present. Resolution of the serous detachment has been reported after discontinuation of steroids and institution of anti-tubercular drugs, and beta blockers have been found to be useful in a small number of patients. Psychosomatic assessment of patients with ICSC did not reveal any conspicuous abnormality that warranted psychotherapy.

Photocoagulation using different wavelengths, and different techniques can bring about a quicker resolution of fluid, amelioration of symptoms, and improvement in vision. Such a response to laser treatment is seen in eyes with bullous serous detachments as well. However, some residual defects in macular function, and chronic changes in the RPE may remain, and recurrences are possible. The most important indication for laser treatment is the patients’ intolerance to symptoms, inability to perform daily tasks because of symptoms, or the need for normal vision in each eye that is mandatory in certain professions. Other considerations include the duration of the serous

Fig. 1. Fundus picture at presentation showing a clear view of the affected right eye. The patient presented with a visual acuity of Hand movements ‘a clear ocular media’ and a large area of RPE necrosis involving the entire posterior pole

Fig. 2. Fundus picture at presentation showing a clear view of the inferior retina of the affected eye affected right eye. ‘A clear ocular media’ and a large area of inferior retinal detachment is seen at presentation

Fig. 3. The inferior retinal detachment showed some resolution in a months time (a) However the macular lesion resolved very slowly over a period of several months (b,c,d)
detachment, location of leakage on the fluorescein angiogram in relation to the fovea, and recurrences. Laser photocoagulation consists of identifying the origin of dye leakage at the RPE from a recent fluorescein angiogram, and treating these sites directly with burns that are just visible. Associated RPE detachments may be treated entirely in the same manner. Such direct treatment was found to be superior to indirect treatment, and is the most common method adopted. However, disappearance of a foveal leak after treatment of other leaks, and resolution of serous detachment after a grid pattern of treatment in eyes with diffuse RPE changes have been reported. Apart from the argon green laser, effective treatment of ICSC has been reported with other wavelengths, and with the subthreshold technique as well. The krypton red has been successfully used to treat leaks much closer to the fovea. An accidental foveal burn is a potential complication with laser treatment of ICSC, and laser burns may enlarge over a period. Choroidal neovascularisation is rare, but may occur at the site of laser treatment, and care must be taken not to overlook a small choroidal neovascularisation prior to treatment.

More recent approaches in the treatment of CSCR include the use of photodynamic therapy, sometimes guided by indocyanine green angiography, and transpupillary thermotherapy. These procedures, performed on patients who had chronic CSCR, or fluorescein leaks at or close to the fovea, resulted in resolution of serous detachment, decrease or cessation of dye (fluorescein and indocyanine green) leakage, and stabilisation of vision in most patients, though one developed choroidal neovascularisation. Vitrectomy using perfluorocarbon liquid and endolaser was successful when a bullous serous detachment did not allow adequate laser treatment.

References

19. Cardillo-Piccolino F, Eandi CM, Ventre L, Rigault de la Longrais RC, Grignolo FM. Photodynamic therapy for
chronic central serous chorioretinopathy. Retina 2003; 23: 752-63.


In lighter vein

RRV

**NO TITLE**

If you look at it closely, conducting an Ophthalmic Conference is very much like undertaking a cataract surgery with only minor differences. You don’t think so? Look at it this way.

**CATARACT SURGERY**

Patient selection
Beware of hypertensives, diabetics, ones with systemic problems and ones with prominent eyes

Anaesthesia
Local preferred

Pupils
Should be well dilated
(Operation) Theatre ambience
Patient should be comfortable

Visco-elastics
Use in plenty

Implant
1. Foldable preferred
2. ‘In the bag’ preferred

Congestion (ciliary)
Is not preferred on the next day

**OPHTHALMIC CONFERENCE**

Organising committee selection
Beware of ones with short tempers, “ladies’ men”, ones involved with other associations and ones who look too much into protocols and precedence.

Anaesthesia (read ‘Fellowship’)
‘Local’ is OK; but ‘foreign’ is preferred.

Pupils (and teachers & all else)
Should be well dilated (with food and drinks)
(Lecture) Theatre ambience
Delegates should be comfortable

Visco-elastics (read flattery)
Use in plenty, on faculty, staff, delegates, everyone in general

Implant (read complement kit)
1. Foldable is alright; but a rigid ‘VIP’ brief case will be preferred
2. As many things ‘in the bag’ as possible preferred

Congestion (of creditors)
Is not preferred on the next day