Optometric management of Central Serous Chorioretinopathy (CSC)

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Central Serous Chorioretinopathy is also called CSCR or Central Serous Retinopathy (CSR).

Aetiology and risk factors:

- Possibly idiopathic,
- 'Type A' personality and/or stress,
- Steroid medication,
- Pregnancy,
- Cushing Syndrome[1],
- Need to rule out other (possibly peripheral) associated retinal abnormality, including retinal detachment, retinal dystrophy, Coats disease, choroidal melanoma[2],
- Sleep apnoea and/or Floppy Eye Lid Syndrome,[3, 4]
- 6x more common in men than women,
- most often affects people aged between 20 and 50[5],
- High alcohol intake or liver disease[6],
- Helicobacter pylori stomach infection, Tuberculosis, depression, psychotropic medication, hypertension, gastro-oesophageal reflex disease, sleep apnoea[7].

Signs:

- Localised retinal lesion with swelling,
- OCT shows sub-retinal fluid without cysts, often with a 'volcano-like' configuration[2], often with pigment epithelial detachment.[8, 9]

Symptoms:

- Unilateral reduced vision,
- Positive scotoma,
- distortion[2],
- colour vision changes[5],
- hypermetropic shift, metamorphopsia or micropsia.[7]

Differential diagnosis/associated ocular conditions:

- Choroidal melanoma,
- Retinal dystrophy,
- Coats disease[2],
- Wet ARMD (especially if patient elderly),
- Retinal vasculitis (may be life threatening),
- Retinal detachment,
- Optic disc pit.[7]

Possible management by ophthalmologist:

- FFA may be used to help confirm diagnosis.[2]

- Indocyanine Green Angiography (ICG) can help differentiate CSC from Idiopathic Polypoidal Choroidal Vasculopathy (IPCV).[8]
- In most cases, the retinal fluid is reabsorbed without any treatment. The majority of people with CSR will regain most or all of the sight they had before. If the fluid is still present after three to six months, treatment may be necessary to prevent more lasting damage to the macula.[5]
- Monitoring may include full threshold macular visual field analysis eg HFA 10-2.[10]
- Advising lifestyle changes, such as reducing stress or stopping some drugs. [5]
- May liaise with GMP to rule out systemic associations.[10]
- Communicate with GP to consider reduction of steroid medication.[8]
- Treatment, when necessary, includes laser or photodynamic therapy (PDT)[5] and Verteporfin and PDT.[11]
- Oral Spironolactone has been found to speed up the absorption of retinal fluid for cases of acute CSC[12] , although this is not used at West Suffolk Hospital NHS Trust at this time as they are awaiting further data.[8]
- Vayalambrone[7] described ophthalmological treatment options as observation, risk factor modification, discontinuation of steroids, laser or Photodynamic Therapy (PDT).

Suffolk LOC Optometric Referral Guidance

The author proposes the following optometric management options, which have the approval of Suffolk consultant ophthalmologists Vayalambrone[10], Hanspal[13] and Gupta[8]:

- Urgent Referral to ophthalmologist: If the optometrist is unsure about the diagnosis (especially if OCT is unavailable) or is unable to rule out other possible associated ocular abnormalities,

- Routine Referral to ophthalmologist for further investigation, when:
    - the optometrist is confident in the diagnosis (and especially if confirmed with OCT),
    - the optometrist has ruled out other possible associated ocular abnormalities,
    - the patient has been advised to return if symptoms were not to gradually improve,
    - consider issuing an Amsler chart to assist the patient to monitor function and/or arranging a follow-up examination,

- No referral to ophthalmologist; Only if:
    - stated in local protocol (no such arrangement in Suffolk) or agreed with local ophthalmologist,
    - all of the conditions for routine referral apply,
    - patient referred to GMP to rule out systemic associations, and
    - early re-examination arranged.

Referral Guidance supportive notes

Optometrists in Suffolk are able to refer via a local Enhanced Service Provider (ESP) via Evolutio Care Innovations Ltd and urgent referral for CSR is recommended.[14, 15] All cases of CSR seen by

optometrists of Evolutio Care Innovations Ltd are referred urgently to a Hospital Eye Service Medical Retina Clinic, even if presenting as an incidental finding, and are no longer simply monitored.[14]

As stated by Vayalambrone[10], if the optometrist decides not to refer to an ophthalmologist,

- they then become the responsible clinician in a medico-legal sense, unless the referral has come from an ophthalmologist to an optometrist for review as part of local arrangements or a shared care pathway,
- they may consider full threshold macular visual field analysis (eg HFA 10-2), as a baseline measure and at follow up, as this is a reasonable indicator of retinal damage, and
- it is recommended consideration given to liaising with the GMP to rule out systemic associations.

Gupta[8] states, full threshold macular visual field analysis can assist in some cases of CSC but is not used routinely in clinical practice.

Supporting the need to refer cases of CSCR, Loft and Simcock[2] state, 'correct hospital follow-up is important, especially if there is any diagnostic doubt'.

CSC and Pigment Epithelial Detachment (PED) can occur in the retinal periphery, in which case there is less need to refer to an ophthalmologist, although the association with sleep apnoea is still possible.[7]

Existing advice from the College of Optometrists regarding CSC:

- There is no Clinical Management Guidance, and
- College Guidance C205 Urgency of Referrals: CSC is not mentioned on the list of conditions requiring emergency or urgent referral, although the list is acknowledged not to be exhaustive.

This optometric management document is for guidance only and the decision on patient care is the responsibility of the optometrist. This document has referenced Suffolk ophthalmologists and an ophthalmology provider although it should be remembered that other Hospital Eye Clinics have different policies on managing CSR. This guidance will change with time based on feedback from stakeholders and other research publications.

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