Title: Slithering its way in - Serpiginous Choroiditis

Abstract: A new patient complains of “seeing shadows” in both eyes for the past six months. Fundus examination reveals bilateral yellow placoid lesions in the retinal pigment epithelium. Relative scotomas are present on visual field testing.

I. Case History
- **Patient demographics:** 62 year old Caucasian male
- **Chief complaint:** Patient presents with complaints of shadows within vision for the past 6 months.
- **Ocular, medical history:** No significant previous ocular history. The patient has Tourette’s syndrome and asthma.
- **Medications:** Haloperidol and Benztropine

II. Pertinent findings
- **Clinical:**
  - BCVA: OD 20/20; OS 20/20
  - Pupils: PERRL (-)APD OU
  - EOMS: SAFE OU
  - Confrontation visual field: OD Full; OS constricted inferiorly
  - Amsler Grid: OD (-)metamorphopsia/scotoma;
    - OS (+)3 degree inferior temporal metamorphopsia and 3-4 degree inferior scotoma
  - Slit Lamp Examination: OU unremarkable
  - Fundus Examination: Optic nerves: pink, healthy 0.2 C/D OU
  - Macula: OU yellow placoid lesions scattered throughout posterior pole, greatest parafoveally
  - Spectralis Macular OCT
    - OD: Normal foveal contour, large nasal and temporal RPE lesion
    - OS: Foveal contour intact, nasal disruption of inner retinal layers with temporal area of RPE lesion
  - Fundus Autofluorescence
    - OD: Hypofluorescent RPE lesions with hyperfluorescent margins
    - OS: Hypofluorescent RPE lesions with hyperfluorescent margins
- **Physical:** Humphrey Visual Field 10-2 SITA FAST
  - OD: Reliable. Inferior temporal defect with fixation spared
  - OS: Reliable. Inferior arcuate defect with possible early superior arcuate
- **Laboratory studies** N/A
- **Radiology studies** N/A

III. Differential diagnosis
- **Primary/leading:** Macular Serpiginous Choroiditis
- **Other:** APMPPE, Toxoplasmosis, Tubercular Serpiginous-like Choroiditis, Choroidal ischemia

IV. Diagnosis and discussion
Macular serpiginous choroiditis is a variant of serpiginous choroiditis with the unique aspect of causing early visual symptoms due to foveal involvement with typically a worse prognosis1. Serpiginous choroiditis is a form of posterior uveitis primarily involving the retinal pigment epithelium, choroid, and choriocapillaris2. It is a progressive bilateral condition often arising
between the 4th and 6th decades of life. It is characterized by recurrent inflammation of the choroid leading to choriocapillaris and RPE atrophy. The condition is more common in males than females with no racial predilection and is rare, accounting for less than 5% of posterior uveitis cases. The most common complication from the condition is formation of choroidal neovascular membranes. Additional complications include branch retinal vein occlusions, serous retinal detachment, cystoid macular edema, subretinal fibrosis, and periphlebitis. Patients often complain of scotomas or visual field constriction.

V. Treatment and management

The management and treatment of serpiginous choroiditis depends on whether the condition is active, the macula is involved and if vision is affected. Macular serpiginous choroiditis tends to be more destructive early on as the site of inflammation generally begins within close proximity of the macula. Treatment is initiated in order to stabilize the active stages, treat complications and help prevent recurrences. Most treatment has been targeted at management of CNVM as it is the most common sight-threatening complication, occurring in up to 25% of cases.

Corticosteroids are typically used as the first line treatment in suppressing inflammation. However, once the course of treatment is concluded, many patients suffer rebound inflammation and have a recurrence of lesions. In order to prevent recurrences, patients are often initially treated with steroids followed by Triple-Agent Therapy for maintenance. Intravitreal bevacizumab has been trialed with success as treatment for CNVM formation in serpiginous choroiditis. Alkylating agents such as Chlorambucil, which interferes with DNA replication, has been shown to effectively maintain vision as well as prevent long-term recurrences.

VI. Conclusion

Serpiginous choroiditis is a form of posterior uveitis primarily involving the retinal pigment epithelium, choroid, and choriocapillaris. Macular serpiginous choroiditis is a variant with the unique aspect of causing early visual symptoms due to foveal involvement with typically a worse prognosis. The management and treatment of serpiginous choroiditis depends on whether the condition is active, the macula is involved and if vision is affected. Treatment is initiated in order to stabilize the active stages, treat complications and help prevent recurrences.

References


