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Abstract—Serpiginous Choroidopathy: A Unique Retinal Finding
A patient presented for follow-up for presumed peripapillary choroidal neovascular membrane in one eye. Further assessment led to a diagnosis of serpiginous choroidopathy. This case focuses on evaluation and management of the condition.

I. Case history
- Patient demographics
  o 64 year old white male
- Chief complaint
  o Patient reports for follow-up exam for presumed peripapillary choroidal neovascular membrane in the left eye
- Ocular/medical history
  o Ocular history: history of bilateral lesions in the retina close to optic nerve and in the macula
  o Medical history: peripheral nerve disease, colonic polyps, benign prostatic hyperplasia, osteoarthritis, chronic maxillary sinusitis, allergic rhinitis, arthralgia of knees
- Medications
  o Cetirizine HCl, Flunisolide 0.025% nasal spray, Diclofenac Na 75 mg, Simvastatin 80 mg, Azithromycin 250 mg

II. Pertinent findings
- Clinical
  o Lens: grade 1 nuclear sclerosis in both eyes without impact on vision
  o C/D ratio: 0.4/0.4 in both eyes, distinct rim, healthy, pink nerve in both eyes
  o Retina:
    - Large chorioretinal scar nasal to the optic disc in both eyes
    - Circinate exudates with associated fluid temporal to the optic disc in the left eye
    - Macula: retinal pigment epithelium atrophy with pigment changes in a wave-like pattern
  o All other ocular findings unremarkable
- Others
  o Patient best corrected to 20/25 in the right eye and 20/20 in the left eye; he reports no change in vision or problems with his vision
  o No metamorphopsia or scotoma noted, no loss of vision noted

III. Differential diagnosis
- Primary/leading
  o Serpiginous choroidopathy (also called serpiginous chorioretinopathy or choroiditis)
- Others
  o Acute posterior multifocal placoid pigment epitheliopathy (APMPPE)
  o Ampiginous choroiditis (also called relentless placoid choroidopathy or APMPPiginous choroidopathy)
  o Multifocal choroiditis with panuveitis (MCP)
  o Presumed ocular histoplasmosis syndrome (POHS)
  o Punctate inner choriodopathy (PIC)

IV. Diagnosis and discussion
- Elaborate on the condition
  o Rare disorder that affects mostly Caucasians in their thirties to sixties
  o Bilateral condition in which there is usually recurrent inflammation of the retinal pigment epithelium and the inner half of the choroid
  o Atrophy typically begins in the peripapillary region and extends into the macula
Can result in choroidal neovascular membrane at the macula or optic nerve; this is a late complication of the disease

Patients will usually present with unilateral painless decrease in vision and complaints of metamorphopsia or scotoma

- Expound on unique features
  - Etiology of the disease is unknown
  - Atrophic areas are “wave-like” or “serpentine” in nature and usually extend from the peripapillary area
  - Patients are typically in good health
  - Considered more of an inflammatory condition than an infectious one, but vitritis and uveitis are both rare presentations within the disease
  - Patient’s unique characteristics include atypical presentation:
    - Atrophic areas do not extend from the optic nerve, but they are close to the nerve
    - Large chorioretinal scars nasal to the optic nerve in each eye

V. Treatment/management

- Treatment and response to treatment
  - An injection of Eylea to the left eye was recommended to decrease the fluid temporal to the optic nerve
  - Due to the risks of injection, patient declined treatment at this time; his best corrected visual acuities are 20/25 right eye, 20/20 left eye

- Refer to research where appropriate
  - It has been documented that anti-VEGF injections can be used to treat choroidal neovascular membrane associated with serpiginous chorioretinopathy
  - Other treatment options include corticosteroids, cyclosporin, and immunosuppressive therapy
  - One study reported that their combination of azathioprine, cyclosporin, and prednisone caused the active disease to regress quickly but only in a few patients

- Bibliography, literature review encouraged

VI. Conclusion

- Clinical pearls, take away points if indicated
  - It is important to conduct all necessary ancillary tests to rule out differential diagnoses
  - Once diagnosis has been made, know how to follow clinical progression:
    - Serial photography to follow change/worsening of disease
    - Fluorescein angiography to verify active vs. inactive phases
      - Active lesions usually show early hypofluorescence and late hyperfluorescence at the borders of the lesions
      - Inactive lesions show mottled hypofluorescence with late staining of pigment clumps
    - Optical coherence tomography to monitor fluid in peripapillary or macular regions
- Visual fields to monitor scotomas if they are present
  o While more likely inflammatory, rule out infectious causes such as syphilitic retinopathy and tuberculosis