Title: The Role of Enhanced Depth OCT in the Management of Birdshot Chorioretinopathy

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Abstract:

Birdshot Chorioretinopathy has been morphologically characterized by Pearse et al. using extramacular Enhanced Depth Optical Coherence Tomography. We present a novel case of longitudinal management of such a case using analogous techniques.

I. Case History

Patient demographics
40-year-old white male
Married and lives with family
Social history otherwise unremarkable

Chief complaint
Bilateral “foggy vision” for several weeks. Has noted dull headache over same period. Notes no alleviating factors.

Ocular history
Glass foreign body OS x 1990
Unremarkable family ocular history

Medical history
Headaches
Hyperlipidemia
Hearing loss

Medications
Simvastatin

II. Pertinent findings

Clinical
Best corrected visual acuity: OD: 20/20-1
OS: 20/20

Preliminary Testing:
Color vision (Ishihara): 12/12 OD, OS
Red-cap desaturation test: OD = OS

Slit lamp exam:
Eyelids/lashes: mild MGD
Anterior chamber: D&Q OU pre-dilation, rare cell no flare post-dilation
Cornea, conjunctiva, iris: within normal limits OU
Lens: clear OU
Tonometry:
  OD: 11 mmHg
  OS: 13 mmHg
Dilated fundus exam:
  Vitreous: PVD, 2+ vitritis OD, OS
  Optic nerve: Bilateral edema with (-)pattons folds/splinter hemorrhages
  Macula: normal
  Posterior pole: Multifocal yellow/creamy placoid lesions deep throughout posterior pole OU
  Vessels: normal, no vasculitis OU
  Periphery: normal OU

Laboratory studies:
  CBC, ESR, FTA/ABS, Lyme titer, ACE, PPD all WNL
  HLA-A29 positive

Imaging Studies:
  -Enhanced Depth Imaging OCT (EDI-OCT) with suprachoroidal hyporeflective space, discrete hyperreflective foci and disruption of IS/OS junction
  -Supporting fluorescein angiography
  -Longitudinal studies over months with EDI-OCT with accompanying fundus photography.

III. Differential diagnosis

Leading
  Acute multifocal placoid pigment epitheliopathy (AMPPE)

Others
  Sarcoidosis
  Multiple evanescent white dot syndrome (MEWDS)
  Acute retinal pigment epitheliitis
  Multifocal choroiditis and panuweitis
  Acute zonal occult outer retinopathy (AZOOR)
  Serpiginous choroidopathy
  Syphilis
  Posterior scleritis
  Pars planitis syndrome
IV. Diagnosis & Discussion

Birdshot chorioretinopathy (BSCR) is an idiopathic bilateral inflammatory condition of the retina and choroid, often with a chronic progressive course and evidenced association with HLA-A29\(^1\). Accounting for only 6-8% of posterior uveitis cases\(^2\) and 2% of all uveitis cases\(^3\), the condition is classified by multiple distinct hypopigmented lesions in the posterior pole with vitritis and possible sequelae of disc and/or macular edema. BSCR has only recently been correlated with OCT findings using enhanced depth imaging of the choroidal placoid lesions. We present a case of longitudinal management using these same techniques.

V. Treatment & Management

Started with 15 mg oral predione and Pred Forte qid OU with eventual improvement in symptoms, nerve head edema, and vitritis. There was a demonstrable lag in the response to treatment with regards to OCT findings of the placoid lesions. Upon improvement in clinical signs, began taper of oral prednisone and topical Pred Forte drops. At this writing, treatment is ongoing and patient is being monitored at Q1 month intervals with examination including EDI-OCT.

VI. Conclusion

While BSCR is generally diagnosed based on clinical appearance and human leukocyte antigen serotyping, Pearse et. al. have recently demonstrated multiple OCT findings associated with the condition.\(^4\) It is unknown whether these are unique to BSCR or may share characteristics with other white dot syndromes. While the efficacy of EDI-OCT for diagnostic purposes in BSCR is unclear, it may be helpful in the determine treatment efficacy and monitoring progression.

VII. Bibliography


