Ocular Sequelae Secondary to Disseminated Coccidioidomycosis
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Abstract:
A 75 year-old Caucasian male with a history of disseminated coccidioidomycosis, a dimorphic fungus endemic to parts of Arizona, presented with multiple, focal areas of chorioretinal atrophy in both eyes.

I. Case History
   A. Patient Demographics: 75 year old Caucasian male
   B. Chief Complaint:
      1. Difficulty reading small print
      2. Lenses scratched
   C. Pertinent Ocular History:
      1. Unremarkable
   D. Pertinent Medical History:
      1. Coccidioidomycosis x 2004; disseminated x 2008
      2. Waldenstrom’s macroglobulinemia
   E. Current Medication:
      1. Posaconazole
   F. Other Salient Information:
      1. Previous chemotherapy, cladribine and rituximab therapy for Waldenstrom’s macroglobulinemia

II. Pertinent Findings
   A. BCVA: OD 20/20; OS 20/20
   B. Fundus exam:
      1. Several diffusely scattered small round focal areas of chorioretinal atrophy extending from the arcades to mid-periphery OS > OD
      2. Lesions appear pearly yellow-white in color, several lesions present with pigmentation along the borders
   C. Laboratory studies: serology include complement fixation for coccidioidomycosis (titers for IgM, IgG)
      1. Coccidioidomycosis IDTP negative
      2. Coccidioidomycosis IDCF negative; IDCF titer not detected
   D. Radiology studies:
      1. Chest x-ray: bilateral disseminated reticulonodular infiltrates of both lungs, suggestive of bacterial pneumonia and disseminated coccidioidomycosis
      2. Knee x-rays: ill-defined lucency in the left femoral metaphysic compatible with coccidioidomycosis osteomyelitis per outside biopsy
   E. Specialized testing: biopsy of lesions/area of suspected dissemination
      1. Left knee biopsy: coccidioidomycosis osteomyelitis
III. Differential Diagnosis
A. Primary/Leading differentials:
   1. Presumed Ocular Histoplasmosis Syndrome (POHS)
B. Secondary differentials:
   1. Blastomycosis
   2. Candidiasis
   3. Cryptococcosis
   4. Multifocal choroiditis
   5. Birdshot choroidopathy
   6. Toxoplasmosis

IV. Diagnosis and Discussion
A. Multiple areas of chorioretinal atrophy OS>OD (inactive lesions)
   1. History of disseminated coccidioidomycosis
   2. Treatment with Fluconazole x 3 years
      a. Current treatment with Posaconazole
B. Disseminated coccidioidomycosis
   1. Spread to the skin, liver, brain and meninges, heart, GI tract, adrenals, kidney, and bladder rare affecting less than 1% with primary coccidioidomycosis
   2. Systemic anti-fungal treatment depends on the type and severity of infection
C. Ocular sequelae infrequently reported though true prevalence is unknown
   1. Uveal tract: granulomatous iridocyclitis with iris nodules and mutton-fat keratic precipitates
   2. Posterior segment: numerous scattered, discrete, yellow-white lesions less than one disc diameter in size
   3. Other signs: exudates, vascular sheathing, retinal hemorrhage, serous retinal detachment, and vitreous haze

V. Treatment and Management
A. Dilated fundus examination annually
B. Patient education
C. Photodocumentation of posterior segment findings
D. Continue care with infectious disease and pulmonary clinics

VI. Conclusion
A. Males are more prone to disseminated disease and very young and elderly patients are more susceptible to infection.
B. Ocular infection from coccidioidomycosis is most frequently seen in patients with severe, life-threatening disseminated disease.
C. A thorough case history is needed to distinguish between coccidioidomycosis from other endogenous fungal infections and inflammations of the retina and choroid such as POHS. The record should include where a patient has lived and/or visited.
Bibliography: