

## Retinal Findings with Systemic Disease

Author: Jeffrey D. Gerson, O.D., F.A.A.O.

Description: With the increase in prevalence of many systemic diseases increasing, so too are the associated retinal findings. This course will discuss some of these systemic conditions and their retinal findings. Attention will be paid to diagnosis and treatment as well as appropriate referrals. Cases will be used to demonstrate actual scenarios.

### Goals:

1. Become familiar with some common, and some less common systemic conditions.
2. Discuss prevalence of these conditions and some of the ocular findings that may be associated with them.
3. Discuss how these systemic conditions affect eyes, and in particular retinal pathology.
4. Discuss treatments for retinal conditions associated with systemic diseases.
5. Discuss appropriate referrals for patients, and when referral for the systemic conditions is more important than eye care.
6. Discuss the importance of integration of eyecare into overall patient care.

### Outline:

Methods of detection of retinal disease                      10 minutes

    Clinical exam

    Advanced technology

        Fundus photography

            Traditional

            (Ultra)Widefield imaging

        Optical Coherence Tomography

        OCT angiography

Histoplasmosis    10 minutes

    Systemic information

        Causative organism: *Histoplasma capsulatum*

        Systemic symptoms; rare but possible

        Primarily systemic disease with widespread implications

## Ophthalmic implications

Previously called "POHS" now more correctly called "OHS"

Triad of signs: peripapillary atrophy, disseminated histi spots and macular involvement

Treatment implications and possibilities

Only treated with CNVM

Anti-VEGF injections

Diabetes

25 minutes

### Systemic information

Identification of and distinctions between pre-diabetes, type 1 diabetes and type 2 diabetes

Systemic clinical trials pertinent to primary eyecare

DPP, DCCT, UKPDS

Importance of A1c: Quality of life

Importance of prevention if already pre-diabetes

Importance of good control from disease onset

How an OD can discuss these points with patients

### Ocular implications beyond retinopathy

#### Retinopathy

Discussion of retinopathy grading scales and implications

Important clinical trials: DRS, ETDRS, DRCR.net

Importance of PRP for proliferative disease

Role of Anti-VEGF in diabetic eye disease

Multiple agents used for CSME, and sometimes DME

Evolution of treatment trends over time in regards to modality and timing

Reversal of retinopathy with anti-VEGF

Oral medications/supplements for diabetic eye disease

Retinal complications from hypertension 10 minutes

Definitions of HTN and stages

Hypertensive retinopathy

Vascular occlusions

Branch Retinal Vein occlusions

Ischemic vs non-ischemic and affect on f/u

Treatments: recent clinical trials

Timing of treatments: now versus in past

Referral guidelines and timing

Central Retinal Vein Occlusions

Criteria to use for follow-up schedule

CVOS vs more recent clinical trials

Historical standard treatment for edema

Current standard for treatment

Impact of recent treatment protocol changes on OD's

Timing of treatments: now versus in past

Referral guidelines and timing

Use of aspirin policy after vein occlusions

Central Serous 10 minutes

Retinal appearance and importance of in office testing

Potential systemic factors being causative: distress, steroids

Treatments: Observation often adequate, but sometimes laser or AntiVegF

Patient education and follow-up

Tumors/growths in the eye 10 minutes

Significance of nevus and odds of conversion to melanoma

5 factors according to Shields

Likely site of primary tumors if metastasis to eye

Sites to which ocular malignancies metastasize

Choroidal melanoma

Statistics of survival

Treatment modalities and quality of life (COMS)

Drug related toxicities

15 minutes

Plaquenil

Current standards for diagnosis and screening protocols

Instrumentation needed to adequately monitor

Standards of care

Objective and subjective testing

Potential importance of pt ethnicity

Tamoxifen

Interferon

Canthoxanthin

Artery occlusion

10 minutes

Systemic associations

Retinal findings

+/- Hollenhorst plaque

Retinal whitening

Retinal treatments

Other possible ocular findings

Importance of systemic care/ follow-up