Macular disease that is not AMD

OPT: 243 Spring B 2010
Leo Semes, OD
Professor
UAB School of Optometry

Macular disease when it’s NOT AMD

- Type II and III NV
- VMT
- Vitelliform
- Stardart
- CME
- CSME
- ICSC
- Toxic
- PED
- Infectious etiologies
  - Toxoplasmosis
  - Histoplasmosis
  - Rubella
  - Syphilis
- Other hereditary macular presentations
  - Familial dominant drusen
  - Progressive cone dystrophies
  - Macular retinoschisis
  - N.C. Dystrophy
  - Sorsby
  - Goldmann-Favre Syndrome
  - Albinism

86 YOWM

- Presents with reduced VA OS
- POH: repaired peripheral retinal hole SN OS X 11 yrs
- Pseudophakic in each eye
- Medicated for HTn X 20 yrs

20/80

What’s the diagnosis and management?

86 YOWM

- Note retinal thickening with intact RPE

20/80

Caliper to measure
Retinal thickness = 462 μ
Note retinal thickening Temporal + Inferior to Macula

Retinal angiomatous proliferation
- Aka Type III neovascularization (intraretinal NV)
- Management
  - Avastin injection ⇒ 20/40 @ 3 weeks
  - 20/60 with 4 additional treatments @ 2 years

Neovascularization
  - Type I – CNVM
  - Type II – retinal telangiectasia

04/09/2008 S/P 1 Avastin injection
Note retinal thickness response 276 u
Idiopathic Juxtafoveal Retinal Teleangiectasia (IJRT) – Type II NV

- Rare acquired foveal vascular formation that may develop a CNVM
- Visual prognosis is guarded, at best
- 5 stages (implying progressive tendencies)
- If CNVM, anti-VEGF agents have been successful
- Histologically, the vessels appear to arise from the RETINAL circulation (like Type III NV, RAP)

IJRT – case report and review


55 HM w/ 20/30 // 20/25
No complaints; negative ophthalmic history, EX: mild NPDR

Note: occult CNVM; TX – PDT; Stable X 1 year
OS showed similar presentation and response to treatment
Differential diagnosis from DR


<table>
<thead>
<tr>
<th>Table 3</th>
<th>Differential diagnosis comparing idiopathic juxtafoveal retinal telangiectasia with diabetic retinopathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>Diabetic retinopathy</td>
</tr>
<tr>
<td>Diabetic microangiopathy</td>
<td>Yes</td>
</tr>
<tr>
<td>Focal exudates</td>
<td>Yes</td>
</tr>
<tr>
<td>Cotton-wool spots</td>
<td>Yes</td>
</tr>
<tr>
<td>Hemorrhoidal microvascular anomalies</td>
<td>Yes</td>
</tr>
<tr>
<td>Hypoxic edema</td>
<td>Yes</td>
</tr>
<tr>
<td>Allergic retinopathy</td>
<td>Yes</td>
</tr>
<tr>
<td>Atrophic retina</td>
<td>Yes</td>
</tr>
<tr>
<td>Retinal folds</td>
<td>No</td>
</tr>
<tr>
<td>Pigmentary glaucoma</td>
<td>No</td>
</tr>
</tbody>
</table>

61 B/M
• 12/02
• Followed X 12 years - Angioid Streaks 2° A1 Hemoglobinopathy
• VA 20/40

61 B/M
• 12/02
• Followed X 12 years - Angioid Streaks 2° A1 Hemoglobinopathy
• VA 20/25 (OS) - note less involvement

Angioid Streaks - CNVM
• 62 B/M (10/03)
• AS now symptomatic
• VA 20/30 (OD) note increased involvement
• RTC 4-5 mo.

Angioid Streaks - CNVM
• 63 B/M (9/04)
• VA 20/80 (OD) note significant clinical picture consistent with remodeling following Verteporfin treatment
OD – S/P Vertiporfin treatment

VA = 20/200 7/08
VA = 20/200 8/09

OS – a different story

7/08 – sub macular fluid
VA = 20/80
Treatment with Avastin

OS 8/09

S/P 3 Avastin injections
VA = 20/40 with GA; flat macula
4/28/10: cats VA = 20/60

CNVM 2° Angioid streaks
2° A1 Hemoglobinopathy
• Questions
• Comments

Vitreo-macular traction syndrome (VMT)
• Macular traction
• “ERM” formation
• Macular hole

74 B/F 20/60 (also has Mod NPDR)
Note cystic space in the macula

Note small cystic space in the left macula and corrugated appearance to retinal surface

Macular hole
- Pathogenesis
- Staging / clinical observations
- Management options

Macular hole – Pathogenesis (current evidence)
- Hyaloid detachment (perimacularly)
- Persistent attachment at foveal center
- Intraretinal split → cystic space
- Lifting of outer retina → opening of foveal floor
- ! Full-thickness macular hole …
Mod NPDR 4/09 (20/25)

Mild NPDR 4/09 (20/30)

10/09 (20/25)  
Note change in exudative pattern

10/09 – check the macula (20/30)

CSME 11/09  
Patient finally convinced at this visit to visit retina specialist  
Note proximity of exudative pattern temporal to macula

CSME 11/09  
Patient scheduled for anti-VEGF injection and encouraged to keep appointment
Followed for 2+ years for dry AMD
- Taking 6 mg Lutein / day + Centrum Silver
- And a host of medications
- BSCVA 20/40+, 20/40+
- Drusen and pigment changes in each macula

01/16/2007 20/40
Continue vitamin supplements
RTC X 1 year

04/14/2009: "I woke up in the middle of the night and I could not see the middle number on the digital clock with my right eye.
20/60 20/40

Combine drusen size as a risk with pigment abnormalities

Combine drusen size as a risk with pigment abnormalities

Note significant RPE disruption
Management & Follow-up

• Retinal consult for CNVM
• Avastin injection same day
• 05/09 2009
  • VA 20/60, 20/50 stable macula
  • Follow X 3 months

Fundus image 1  OD/ OS

Which one is 20/25 and 20/200?
Is either at risk for NV?

Fundus image 2 – progression?
<table>
<thead>
<tr>
<th>Date</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/2/09</td>
<td>OD still 20/25</td>
</tr>
<tr>
<td>6/2/09</td>
<td>RPE OS 6/2/09</td>
</tr>
</tbody>
</table>

**FD-OCT 6/2/2009**

**Segmentation of layers**

- Segmentation and Registration (OS)