Transient Vision Loss in a 28-Year Old Pregnant Woman

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Disclosure

• I have no financial disclosures or relevant interests related to the content of this presentation
Objectives

• To present the case of a 28-year old, pregnant woman with transient binocular vision loss
• To discuss the approach to transient vision loss with specific emphasis on issues related to pregnancy
History

- 28-year old woman, G₁P₀ presents at 30 weeks gestation
- She describes transient episodes of vision loss lasting **seconds**, prompted by bending forward (4 weeks)
- She also hears a “whooshing” sound in her head at bedtime (4 weeks)
Examination

- **General:** Blood pressure 120/70 mm Hg
- **Visual Acuity:** 6/6 in both eyes
- **Pupils:** Equal and reactive, no RAPD
- **Color Vision:** 6/6 HRR Pseudo-Isochromatic plates in both eyes
Visual Fields

Left Eye

Right Eye

Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 1/20
False POS Errors: 0%
False NEG Errors: 0%
Test Duration: 07:24

Stimulus: II White
Pupil Diameter: 4.2 mm
Date: 06-05-2017
Time: 2:44 PM
Age: 20

Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 0/17
False POS Errors: 0%
False NEG Errors: 0%
Test Duration: 06:13

Stimulus: II White
Pupil Diameter: 5.0 mm
Date: 06-05-2017
Time: 2:50 PM
Age: 20

GHT
Outside Normal Limits
VFI 95%
MD -4.83 dB P < 0.5%
PSD 4.22 dB P < 1%

Total Deviation
Pattern Deviation

GHT
Within Normal Limits
VFI 98%
MD -1.33 dB
PSD 2.34 dB P < 10%

Total Deviation
Pattern Deviation

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Fundus Photos

Right Eye

Left Eye
What Should You Do Now?
Investigations

• Blood Pressure = 107/68 mm Hg
• Cell count with differential, liver enzymes, and urinalysis are NORMAL (no signs of Hemolysis, Elevated Liver enzymes, Low Platelets = HELLP syndrome)
Axial MRI showing tortuosity of the optic nerve sheaths

Sagittal MRI showing “Empty Sella” sign
Normal MR-Venography
Lumbar Puncture

- CSF Cell Count: Normal
- CSF Protein & Glucose: Normal
- CSF Cultures: Normal
- CSF Cytopathology: Normal
- CSF Opening Pressure: 40 cm of water
Diagnosis

Idiopathic Intracranial Hypertension in Pregnancy
What Needs to Be Ruled Out?
# Superior Sagittal Sinus Thrombosis

## TABLE 4. Etiologies of venous thrombosis in pregnancy and the puerperium

<table>
<thead>
<tr>
<th>Etiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein C and S</td>
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<tr>
<td>Anticardiolipin antibodies</td>
</tr>
<tr>
<td>Leiden Factor V (protein C resistance)</td>
</tr>
<tr>
<td>Prothrombin gene</td>
</tr>
<tr>
<td>Homocysteinemia</td>
</tr>
<tr>
<td>Paraproteinemia</td>
</tr>
<tr>
<td>Thrombocytemia</td>
</tr>
<tr>
<td>Cryoglobulinemia</td>
</tr>
<tr>
<td>Systemic lupus; Crohn disease</td>
</tr>
<tr>
<td>Behcet disease</td>
</tr>
<tr>
<td>Middle ear infection</td>
</tr>
<tr>
<td>Sarcoid</td>
</tr>
<tr>
<td>Trauma</td>
</tr>
<tr>
<td>Paroxysmal nocturnal hemoglobinuria</td>
</tr>
<tr>
<td>Postpartum state</td>
</tr>
<tr>
<td>Venous obstruction by meningioma</td>
</tr>
</tbody>
</table>

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Intracranial Lesion Causing Raised ICP

This 30-year old woman presented with headaches, transient visual obscurations, pulsatile tinnitus, and diplopia during her third trimester of pregnancy...
Seizures Caused by an Occipital Cavernoma

A 32-year old woman reports repeat episodes of flashing lights in her right visual field lasting seconds in duration. She has known migraines but denies actives headaches.
Update on the evaluation of transient vision loss

Table 1 Categories of transient vision loss

<table>
<thead>
<tr>
<th>Location</th>
<th>Causes of transient vision loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monocular</td>
<td>Vascular – embolic</td>
</tr>
<tr>
<td></td>
<td>Vascular – thrombotic (giant cell arteritis)</td>
</tr>
<tr>
<td></td>
<td>Vascular – stenotic</td>
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<tr>
<td></td>
<td>Vasospasm</td>
</tr>
<tr>
<td></td>
<td>Retinal migraine</td>
</tr>
<tr>
<td></td>
<td>Ocular – closed angles, hyphema</td>
</tr>
<tr>
<td></td>
<td>Vascular – thromboembolic</td>
</tr>
<tr>
<td>Binocular</td>
<td>Occipital epilepsy</td>
</tr>
<tr>
<td></td>
<td>Complex migraine</td>
</tr>
<tr>
<td>Monocular or binocular</td>
<td>Papilledema or optic disc disease</td>
</tr>
<tr>
<td></td>
<td>(transient visual obscurations)</td>
</tr>
<tr>
<td></td>
<td>Uhthoff phenomena</td>
</tr>
</tbody>
</table>
Uhthoff’s Phenomenon

Episodic visual loss or blurring associated with increased body temperature in the setting of CNS demyelination
Posterior Reversible Encephalopathy Syndrome (PRES)
Branch Retinal Artery Occlusion

- A 30-year old pregnancy woman presents with recurrent spells described as a “curtain coming down” in the vision of her right eye.
- She awakens with a fixed central scotoma.
A 34-year old pregnant woman reports repeat painless events of vision loss (to light perception only) lasting minutes in duration, occurring several times daily in the left eye.
Conclusions

- The list of possible causes of transient vision loss in pregnancy is broad.
- The cause of vision loss can usually be localized based on the presenting symptoms and signs found on examination.