Case Presentation

By Nnaemeka Onyekaba
ID PGY-4
Case Presentation

Patient is a 53 Female who presents with **R facial & nuchal rash** on 5/26/19.

**Patient has a medical history of:**

- **HTN**
- **Migraine**

*Patient came from Oman 3 weeks earlier.*
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- **All:** NKDA
- **PSH:** None
- **FH:** Father has history of CAD
- **SH:** Denies tobacco/alcohol/illicit drug use.
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- **Lives:** with children in Oman

- **Occupation:** Full-time housewife

- **Travel:**
  - Oman
  - Spent 1 week in Ohio
  - Philadelphia

- **Pets:** None
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Pruritic Rash 1st appeared in R neck
Spread to the following areas:
- R Ear
- R shoulder
- R face
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Complained of the following associated symptoms:

• Headache for 8 days (preceded rash; failed to improve with Tylenol).
• Odynophagia (mild)
• Fever (subjective)
• Chills
Denies the following:

- Nuchal rigidity
- Photophobia
- Visual changes
- Cough
- SOB
- Chest pain
- Nausea
- Abdominal pain
- Myalgia
- Arthralgia
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• Denies the following:
  • Sick contact(s)
  • Farm animals
  • Contact with animal hides or skin.
  • Recent spider or insect bite
  • Outdoor activities
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Vitals
T 98.2F   BP 152/62   HR 68 RR 18

Physical examination
• GA: Patient was in distress from headache.
• Skin: warm and dry with good turgor. **Presence of rash with central eschar in R aspect of face & neck**
• HEENT: NCAT. Ears clear. Eyes no icterus or conjunctivitis. PEERLA. Nose is clear. No oral thrush.
• Neck: Supple without JVD, thyroid enlargement or bruits.
• LUNGS: CTA and percussion. No rales, rhonchi or wheezes
• CV: RRR, No murmurs, thrills, heaves or rubs. S1/S2 normal.
• Abdomen: flat and soft. No guarding or rigidity. Bowel sound present.
• Extremities: No pedal edema.
• Neuro: AOx3. CN intact
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LABS

- Segmented/Bands/mono/eosinophil: 72/5/7/1
- AST/ALT/ALP: 18/21/53
- T bili: 0.41
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Differentials?
Differential Diagnosis

- Mediterranean spotted fever (R. conorii)
- Cutaneous anthrax
- Histoplasmosis
- Cutaneous leishmaniasis
- VZV
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Imaging:

• **Chest x-ray**: No significant findings.

• **CTH 5/27**: *Diffuse leptomeningeal enhancement suspicious for meningitis. No significant mass effect.*

• **MRI Brain 5/29**: No significant findings.
CTH leptomeningeal enhancement
Case Presentation

<table>
<thead>
<tr>
<th>CSF analysis (after LP on 5/27/19)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening pressure</td>
<td>7cm H2O (clear colorless)</td>
</tr>
<tr>
<td>RBC</td>
<td>10</td>
</tr>
<tr>
<td>WBC</td>
<td>353</td>
</tr>
<tr>
<td>Neutrophils</td>
<td>0</td>
</tr>
<tr>
<td>Lymphocytes</td>
<td>76%</td>
</tr>
<tr>
<td>Glucose</td>
<td>69</td>
</tr>
<tr>
<td>Protein</td>
<td>49</td>
</tr>
</tbody>
</table>
## Case Presentation

<table>
<thead>
<tr>
<th>CSF studies</th>
<th>HSV/VZV studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hu Ab</td>
<td>Negative</td>
</tr>
<tr>
<td>JC virus</td>
<td>Negative</td>
</tr>
<tr>
<td>Listeria Ab</td>
<td>Negative</td>
</tr>
<tr>
<td>VDRL</td>
<td>Negative</td>
</tr>
<tr>
<td>WNV</td>
<td>Negative</td>
</tr>
<tr>
<td>Toxoplasma</td>
<td>Negative</td>
</tr>
<tr>
<td>HSV 1/2</td>
<td>Pending</td>
</tr>
<tr>
<td>Adenosine Deaminase</td>
<td>Negative</td>
</tr>
<tr>
<td>Lyme</td>
<td>Negative</td>
</tr>
<tr>
<td>Coccidi IgG</td>
<td>Negative</td>
</tr>
<tr>
<td>CSF culture</td>
<td>Negative (held for 6 days)</td>
</tr>
<tr>
<td>CSF VZV IgG</td>
<td>Positive</td>
</tr>
<tr>
<td>CSF VZV DNA</td>
<td>Never reported</td>
</tr>
</tbody>
</table>

- **HSV 1 swab** Negative
- **HSV 2 swab** Negative
- **HHV-8 blood** Negative
- **VZV swab (PCR)** Positive
- **HIV** Negative
- **TP Ab** Non-reactive
- **Histoplasma Ag (urine)** Non-reactive
Case Presentation

• Pathology from punch biopsy: *acute-chronic inflammation & extensive necrosis*. No *malignancy or viral inclusion seen.*

• Blood cultures: *Negative (held for 5 days)*
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<table>
<thead>
<tr>
<th>Antibiotics &amp; Antivirals</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ciprofloxacin</td>
<td>STAT on 5/27</td>
</tr>
<tr>
<td>Clindamycin</td>
<td>STAT on 5/27</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>5/27-5/29</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>5/27-5/29</td>
</tr>
<tr>
<td>Ampicillin</td>
<td>5/27-5/29</td>
</tr>
<tr>
<td><strong>Acyclovir</strong></td>
<td>5/27-6/3</td>
</tr>
</tbody>
</table>

*per Primary team*
VZV-neurological complications

The incidence of neurologic complications associated with varicella is estimated to be 1–3 per 10,000 cases.

The most frequently occurring neurological complications include:

- Cerebellar ataxia
- Encephalitis
- Aseptic meningitis.
Varicella with cerebellar ataxia

• **Occurs in 1 in 4000 varicella cases.**

• **Possible mechanisms:** Direct viral infection of the cerebellum vs post-infectious demyelinating process

• **Ataxia develop within 2 weeks after onset of varicella.**

• Neurologic symptoms seen **25% of patients** most often occur simultaneously with rash.
Varicella encephalitis

- Most serious CNS complication of varicella.

- Incidence: 1–2 episodes per 10,000 varicella cases.

- Mechanism: Post-infectious demyelinating process vs direct viral cytopathology.

- Neurologic symptoms most often occur about 1 week after the onset of the varicella rash.

- The mortality for varicella encephalitis is 5%–10%.
Varicella meningitis

• Cause of 5-11% cases of aseptic meningitis.

• Present with or without dermatomal rash.

• Diagnosed with CSF: VZV Ab (IgM/IgG) or VZV DNA PCR.

• Recommended treatment is Acyclovir IV for 10-14 days.

• Can be treated with oral Valacyclovir for 10-14 days.
Varicella meningitis

- Patient was discharged on oral valacyclovir (completed 7 days of IV acyclovir).
Varicella meningitis
Thank you