Acute Genital Ulcerations

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Disclosures

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• I do not intend to discuss an unapproved/investigational use of a commercial product/device in my presentation.
HPI

13 year-old girl with no prior medical history
CC: dysuria to point of urinary retention
• Malaise, headaches, fevers 5-6 days
• Experienced vulvar pain and erythema
• Evolved into “black dots” which then ulcerated
• Admitted due to severe vulvar pain, dysuria, and urinary retention
• Denies any prior history of sexual contact / trauma

Physical examination

VS: Ht 163 cm / Wt 55.6 kg / BMI 20.9 / T 98.2F / HR 74 / RR 23 / BP 119/65 / SaO2 100% on RA
General: WDWN. In NAD. Alert, appropriate
HEENT: Conj clear bilat. OMM, no lesions/ulcers. No facial palsy
Lungs: CTAB
CV: RRR, no M/R/G
Abd: Soft, no HSM noted, no TTP.
Skin/Extr: No rash. No lymphadenopathy.
GU: Tanner 2. 3 shallow ulcers w/yellowish exudate on left labia majora
Multiple family members get cold sores, but not the patient
Physical examination

3 shallow ulcers 0.5 x 1 cm wide over labia majora

Differential Diagnosis

**Infectious**
- HSV 2 (and 1)
- Syphilis
- Chancroid *(haemophilus ducreyi)*
- Lymphogranuloma venereum *(Chlamydia trachomatis* L1, L2, L3)
- Granuloma inguinale (donovoniasis)
- Secondary bacterial infection
- Fungi

**Noninfectious**
- Behcet syndrome
- Fixed drug eruption
- Psoriasis
- Sexual trauma
- Wegener granulomatosis

Roett MA, Maor MT, Uduhiri, K. Diagnosis and management of genital ulcers. *Am Fam Physician.* 2012 Feb 1; 85(3):254-262
Workup:

I would order:

1. Syphilis screen
2. HIV testing
3. GC/chlamydia urine probe
4. Genital swab for C+S
5. HSV 1/2 PCR swab of lesions
6. EBV titers
7. CBC
8. Urine pregnancy test
9. ID consult

Labs / Radiology

<table>
<thead>
<tr>
<th>Initial Laboratory Values</th>
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<tbody>
<tr>
<td>WBC</td>
</tr>
<tr>
<td>Hemoglobin</td>
</tr>
<tr>
<td>Platelet count</td>
</tr>
<tr>
<td>ESR</td>
</tr>
<tr>
<td>Liver enzymes</td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
</tr>
<tr>
<td>Total bilirubin</td>
</tr>
<tr>
<td>CRP</td>
</tr>
<tr>
<td>Syphilis screen</td>
</tr>
<tr>
<td>N. Gonorrhea / C. trachomatis urine probe</td>
</tr>
</tbody>
</table>
Refined Differential?

Additional history from father…

• 2 wks PTA, tick found attached to pt’s L shoulder
• Not noted to be “engorged”
• 2 days PTA, targetoid rash noted on L shoulder

“Bull’s eye” appearance
## CDC Criteria for Lyme Disease

**Presence of EM**
- OR
- At least 1 late manifestation PLUS lab confirmation

### Late manifestations include:

### Musculoskeletal system
Arthritis of one or few joints, sometimes followed by chronic arthritis in one or a few joints.

### Nervous system
Lymphocytic meningitis, cranial neuritis, particularly facial palsy (may be bilateral), radiculoneuropathy or, rarely, encephalomyelitis alone or in combination. Encephalomyelitis must be confirmed by showing antibody production against B. burgdorferi in the cerebrospinal fluid (CSF), which is demonstrated by a higher titer of antibody in CSF than in serum.

### Cardiovascular
Acute onset, high grade (2nd or 3rd degree) atrioventricular conduction defects that resolve in days to weeks and are sometime associated with myocarditis.

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**Now What?**
Additional history from father...

- Started on doxycycline and cephalexin by PMD after evaluation by PMD
- Only started 1 day PTA

Hospital Course

- Lyme serologies sent
- Oral doxycycline continued
- Treated with topical lidocaine gel and PRN oxycodone
- Subsequent improvement in pain and ulcerations
- Discharged after 2 days
- Biopsy of lesions offered but declined
### Labs / Radiology

#### Serologic Testing

<table>
<thead>
<tr>
<th>Test</th>
<th>On admission</th>
<th>4 wks post-discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBV VCA IgM</td>
<td>57</td>
<td>&lt;36.0</td>
</tr>
<tr>
<td>EBV VCA IgG</td>
<td>&lt;18.0</td>
<td>&lt;18.0</td>
</tr>
<tr>
<td>EBV NA</td>
<td>&lt;18.0</td>
<td>&lt;18.0</td>
</tr>
<tr>
<td>Lyme EIA</td>
<td>Reactive</td>
<td></td>
</tr>
<tr>
<td>Lyme IgG</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Lyme IgM</td>
<td>Positive</td>
<td>Positive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Bands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyme IgG</td>
<td>p41, p23</td>
</tr>
<tr>
<td>Lyme IgM</td>
<td><strong>Positive</strong></td>
</tr>
</tbody>
</table>

*Bands*
Lipschutz ulcers (aka nonsexual acute genital ulcers)

- Rare complication of Lyme disease
- One case reported in adult literature
- Associated with EBV, *Mycoplasma*, HIV, mumps, CMV, influenza
- Ddx: Inflammatory disease, STI
- Initial positive EBV viral capsid IgM likely due to cross reactivity with Lyme, which has been described

Lipschutz ulcers (aka nonsexual acute genital ulcers)

- Lyme should be considered in patients with NAGU in endemic areas
- Follow up serologies and biopsy can be helpful in dx
- Etiology of NAGU in Lyme unknown, considered early disseminated (neg bx for spirochetes in other cases)
- May result from immune response to infection