



Baystate  
Health



University of  
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# Acute Genital Ulcerations

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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 PTA
- 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

## 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

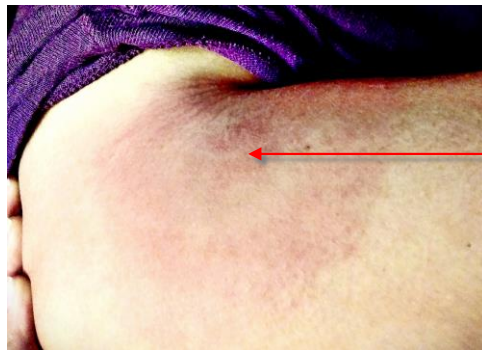
### Initial Laboratory Values

WBC	4.8 k/m <sup>3</sup>
Hemoglobin	10.8 g/dL
Platelet count	290 k/m <sup>3</sup>
ESR	37
Liver enzymes	Within normal reference ranges
Alkaline phosphatase	209 U/L
Total bilirubin	0.3 mg/dL
CRP	<0.1 mg/dL
Syphilis screen	Negative
N. Gonorrhoea / C. trachomatis urine probe	Negative

## 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.

## 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		
Test	On admission	4 wks post-discharge
EBV VCA IgM	57	<36.0
EBV VCA IgG	<18.0	<18.0
EBV NA	<18.0	<18.0
Lyme EIA	Reactive	
Lyme IgG	Negative	Negative
Lyme IgM	Positive	Positive

## Labs / Radiology

Serologic Testing		
Test	On admission	4 wks post-discharge
Lyme IgG	Negative	Negative
<i>Bands</i>	<i>p41, p23</i>	<i>p41, p23, p30</i>
Lyme IgM	<b>Positive</b>	<b>Positive</b>
<i>Bands</i>	<i>p41, p39, p23</i>	<i>p41, p39, p23</i>



## 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



## References

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