**A 31-year-old pregnant woman with fever and cholestasis**

Pietro Bortoletto, M.D.
Obstetrics and Gynecology
Massachusetts General Hospital
Brigham and Women’s Hospital

### Case Presentation

**CC:** Fever, chills, nausea, decreased fetal movement (FM)

**HPI:** 31yo G1P0 @ 35wks w/ di/di twin gestation

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Symptoms and Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 weeks prior</td>
<td>Mild pruritus of palms and soles, Afebrile, Normotensive, +FM, +FH tones x2, Labs: ALT 138, AST 78, Aik Phos 233, Bile acids 33</td>
</tr>
<tr>
<td>2.5 weeks prior</td>
<td>Persistent itching, nausea, occasional vomiting, New pruritic rash on abdomen-&gt;PUPP, Reassuring BPP</td>
</tr>
<tr>
<td>Day prior</td>
<td>Decreased fetal movement and feeling “crummy” x1 week, Nausea, dec appetite, urinary freq, fevers, and chills, No bleeding, LOF, dysuria, Contractions during previous 2 days -&gt; resolved</td>
</tr>
</tbody>
</table>

### Social
- Married
- Works in medicine
- No T/A/D
- Ate boiled hot dogs and commercial-brand hummus through out pregnancy

### Family
- Father w/ DVT
- Husband did not carry the sickle-cell trait

### Past Medical
- Sickle-cell trait
- GERD
- Exercise-induced asthma
- C. difficile infection
- Pancreatitis

### Medications
- Ursodiol
- Ranitidine
- Albuterol inhaler

**Social**
- Married
- Works in medicine
- No T/A/D
- No lunch meat or soft cheeses
- Ate boiled hot dogs and commercial-brand hummus through out pregnancy
### Case Presentation

**Exam:**
- T 38.1°C, BP 120/71, HR 66, RR 22
  - Abd: soft, non-tender
- FHT: Twin A 140 and Twin B 150 w/ accels, mod variability, no decels
- Toco: contractions q 4 min->IVF-> contractions q 8 min

**Labs:**
- CBC and UA wnl
- Urine Culture pending

**A/P:**
- 1 gram of Acetaminophen + IVF
- Discharged home later that evening and advised to monitor her temperature, return in 2 days for evaluation in clinic
- Induction of labor was scheduled for 5 days after this evaluation.

---

### Case Presentation

**HPI:**
38.1°C at home -> 1 gram of acetaminophen
She reported feeling tired and ill, with nausea, loose stools, rigors, arthralgias, and myalgias

**Exam:**
- T 36.7°C -> 38.4°C, BP 133/71, HR 75
  - Abd: warm, non-tender
  - Ext: +1 pitting edema
  - FHT: Twin A 170 and Twin B 180 w/ accels, mod variability, no decels
  - Toco: irregular
  - SVE: closed, long, high
  - US: Vertex/Vertex

**Labs:**
- WBC: 5,940  Hct:30.1
- Basic Chemistry wnl
  - AST: 54  ALT: 37  Alk Phos 263  Tbili: 0.5  D Bili 0.2
  - Amylase 176  Lipase wnl
  - Urine Cx, Blood Cx and GBS pending

**A/P:**
- Amp/Gent + IOL w/ Oxytocin for presumed chorio
**Differential:**
- Intra-amniotic infection with intact membranes (GBS)
- Listeriosis
- Viral infection (acute CMV, hepatitis, influenza, echovirus)
- Pyelonephritis
- Appendicitis

---

### Case Presentation

The next day
Blood culture results

- Two sets of aerobic and anaerobic blood cultures were collected.
- Within 24 hours, both sets turned positive.
- Gram stain was performed.

Photo courtesy of Rachelle Markha
Gross sections of placenta showing macroabcesses

H&E Section of placenta showing microabscesses
Diagnosis?

Listeriosis: Implicated Foods

- Hot dogs, lunch meats, cold cuts (chilled or room temperature)
- Refrigerated pâté and meat spreads
- Refrigerated smoked seafood
- Raw (unpasteurized) milk
- Unpasteurized soft cheeses: feta, queso blanco, queso fresco, Camembert
- Unwashed raw produce

ACOG, CDC

Listeriosis: Hummus

- Commercially prepared hummus
  - Sporadic cases: 6-fold increased risk
  - United States 2015: voluntary recall of 30,000 cases of hummus due to concern over *Listeria* contamination
Listeriosis in Pregnancy

- Majority of affected women healthy
- Most diagnoses in third trimester
- Multiple gestation increases risk

Our patient
- Fever, rigors, malaise
- Nausea, loose stools
- Arthralgias, myalgias
- Symptom duration (one week)
- Fetal intolerance of labor
- Third trimester
- Multiple gestation
- Commercial hummus consumption

Treatment

- Received ampicillin and gentamicin
- Renal insufficiency developed and gentamicin was stopped
- Ampicillin 2gm IV q4h x 2 weeks from first negative blood culture
- Infants: neg BC and lumbar punctures
  - Amp/Gent for 1 week