INFECTIOUS DISEASE EMERGENCIES

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Russell W. Steele, M.D. has no relevant financial relationships with commercial interests to disclose.

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4 Month Old – R/O Sepsis

- Exposed to river water
- Appears toxic
- Altered
- Clear CSF
- Normal CBC

Infant Botulism

CLINICAL DIAGNOSIS OF INFANT BOTULISM

<table>
<thead>
<tr>
<th>Early Symptoms</th>
<th>Later Clinical Findings</th>
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<tbody>
<tr>
<td>Constipation</td>
<td>Drooping eyelids</td>
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<tr>
<td>Generalized hypotonia</td>
<td>Respiratory distress</td>
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<tr>
<td>Poor feeding</td>
<td>Absent deep tendon</td>
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<tr>
<td>Weak cry</td>
<td>Muscle</td>
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<tr>
<td>Wastiness</td>
<td></td>
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<tr>
<td>Dilated reactive pupils</td>
<td>Decreased to absent gag</td>
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<tr>
<td></td>
<td>Poor suck</td>
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<tr>
<td></td>
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Laboratory Diagnosis

- Toxin in stools is diagnostic
- Stool culture for Clostridium botulinum
- Electromyography with repetitive stimulation
- Lumbar puncture to exclude other diagnoses

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Differential Diagnosis
- Sepsis
- Guillain-Barré syndrome
- Myasthenia gravis
- Aseptic meningitis
- Polio
- Diphtheria
- Tick paralysis

Treatment
- Antitoxin for types A and B - human derived (BIGIV)
- Supportive care
- Monitor cardiac and respiratory function
- Endotracheal intubation and assisted ventilation
- Nutrition
- Avoid aminoglycosides

Prevention
- Infants under 1 year of age
- Wash objects placed to infants’ mouths (pacifiers, toys, etc.)
- Wash or peel skin of fruits and vegetables
- Avoid honey
Etiology

- Neonatal
  - Group B streptococcus
  - Escherichia coli
  - Listeria monocytogenes
  - Group D streptococcus
  - Gram-negative coliforms
  - Staphylococcus aureus
- Older children
  - Streptococcus pneumoniae
  - Neisseria meningitidis
  - Haemophilus influenzae type b (in the unimmunized child)
Prophylaxis

- All household contacts
- Nursery or day care center contacts
- Hospital personnel and individual who had intimate exposure to oral secretions from
  - the index case
12 y/o WF; May 1980
Charlottesville, VA

- Vomiting 2 d PTA
- Fever and rash 1 d PTA
- ? Outdoor exposure

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Staphylococcal Toxic Shock Syndrome

**Incubation**

- Menstruation vaginal bleeding begins: 1-11 days after
- Surgical wounds surgery: 2 days after
- Skin, subcutaneous soft tissue, after inoculation: 1 day to 8 weeks
- Wound, or osseous infection: 1 day to 8 weeks
- Postpartum and postabortioan after delivery/abortion: 1 day to 8 weeks

**Signs and Symptoms**

- Rash
- Desquamation
- Fever
- Hypotension
- Pharyngitis
- Strawberry tongue
- Myalgia
- Vomiting
- Dizziness
- Sore throat
- Headache
- Diarrhea

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Treatment

- Supportive intensive care
- Antibiotics (Clindamycin plus penicillin for streptococcus; oxacillin, nafcillin or vancomycin for staphylococcus)
- Discontinue tampon use
- IVIG

6 d/o with poor feeding
Diagnosis

- Cytologic exam of skin, eye or mouth vesicles (fluorescence or Tzanck smear)
- Culture of skin or mucosal lesions
- CSF: PCR
- Blood: PCR