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Project ECHO Session

March 26, 2026



Case: 15-year-old F with General Malaise

- **HPI:** 15 year old F presents to emergency department with 4 days of fever, fatigue, and body aches. Over the last 2 days, she's developed vomiting, chest pain, and shortness of breath
- **PMH, allergies, meds:** none
- Returned 6 days ago from Atlanta, GA where she watched opening round of world cup with her father, who is experiencing similar symptoms
- **Vitals:**
 - HR: 112
 - Resp: 22
 - BP: 118/76
 - O2: 91% on RA

Case: 15-year-old F with General Malaise

- **EXAM:**

General: Ill appearing, slightly labored breathing

HEENT: NC/AT, PERRL, EOMI, oropharynx clear

CV: RRR, no murmurs

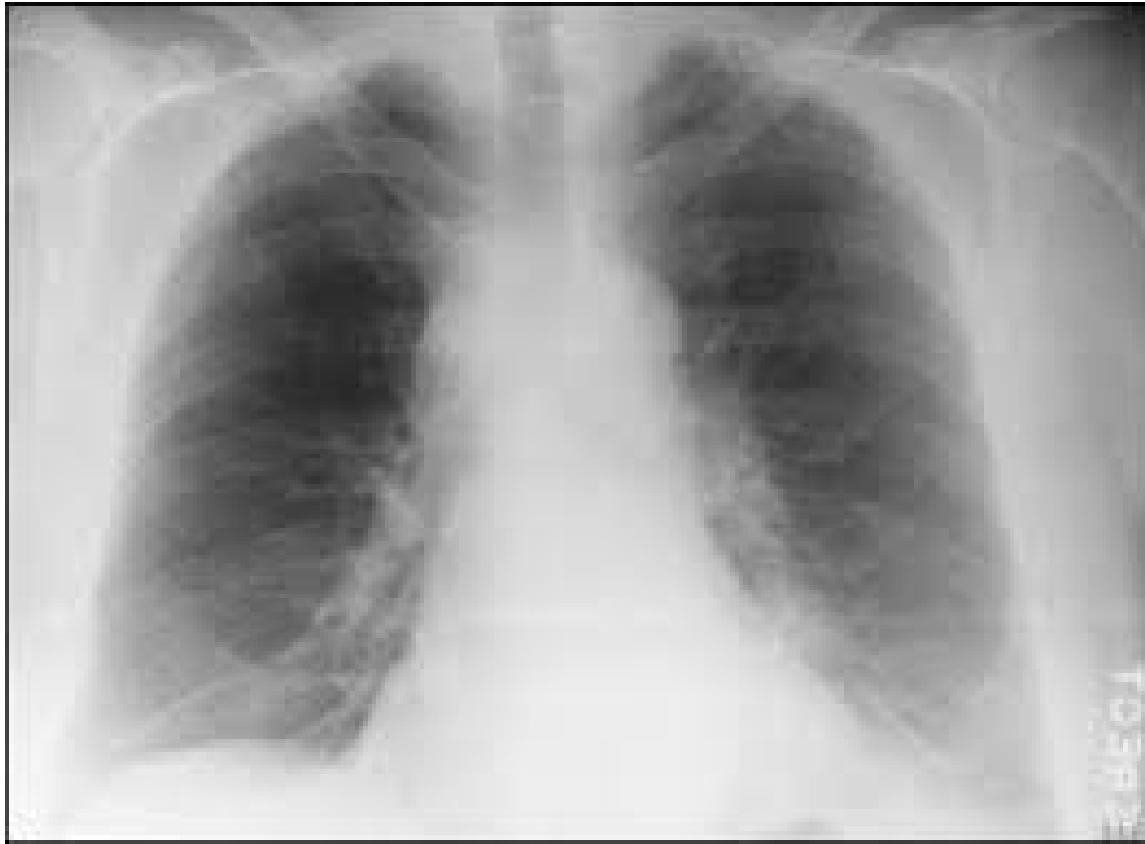
Resp: Scattered occasional coarse sounds, slightly labored breathing

Abd: Soft, NT/ND, no rebound/guarding.

Skin: Warm, dry, no rash, capillary refill = 3 seconds

Neuro: Normal for age

Chest Radiograph



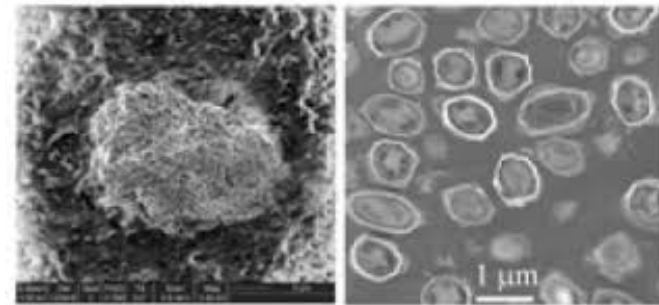
Anthrax

- Traditionally from animal exposure
- Three clinical syndromes:
 - Cutaneous – red papule → vesicle → painless eschar
 - 5-7 day incubation period
 - Good prognosis with treatment



- **Inhalational**

- Aerosolized spore enter lungs
 - 7–9-day incubation period
 - Prodromal phase mimics general viral illness, transitions to respiratory failure
-
- Gastrointestinal – rare in humans



Inhalational Anthrax

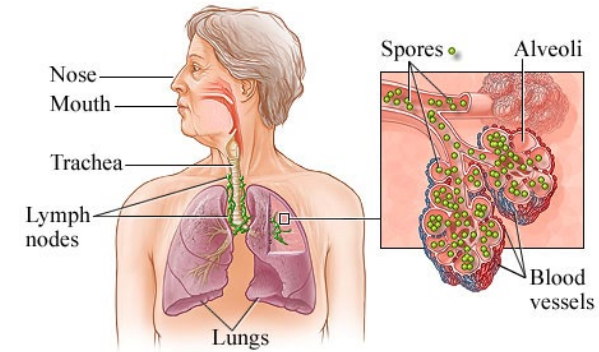
Incubation period 1-6 days

EARLY

- Gradual onset
- Fever
- Malaise
- Non-productive cough, chest discomfort
- May have Improvement 2-3 days

LATE

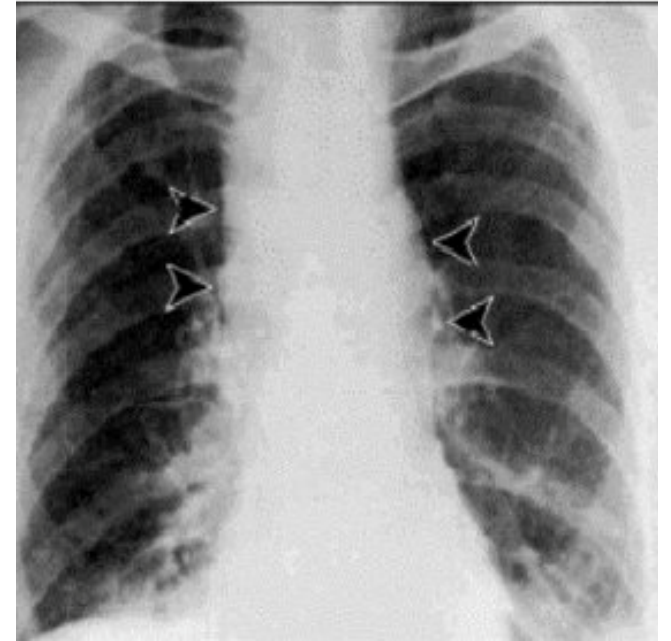
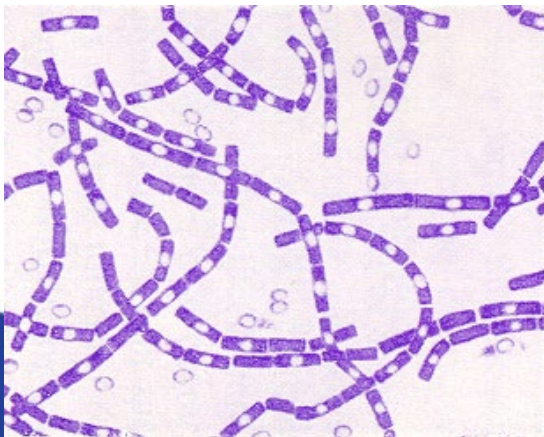
- Severe respiratory distress
- Cyanosis
- Septicemia/shock
- 50% hemorrhagic meningitis



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Diagnosis

- Gram stain
- Cultures
- PCR testing
- Widened mediastinum on CXR, no pneumonia



Inhalational Anthrax Treatment

- Two **bactericidal agents** + one **protein synthesis inhibitor**
- Meropenem + Ciprofloxacin + Minocycline
- Supportive care as needed

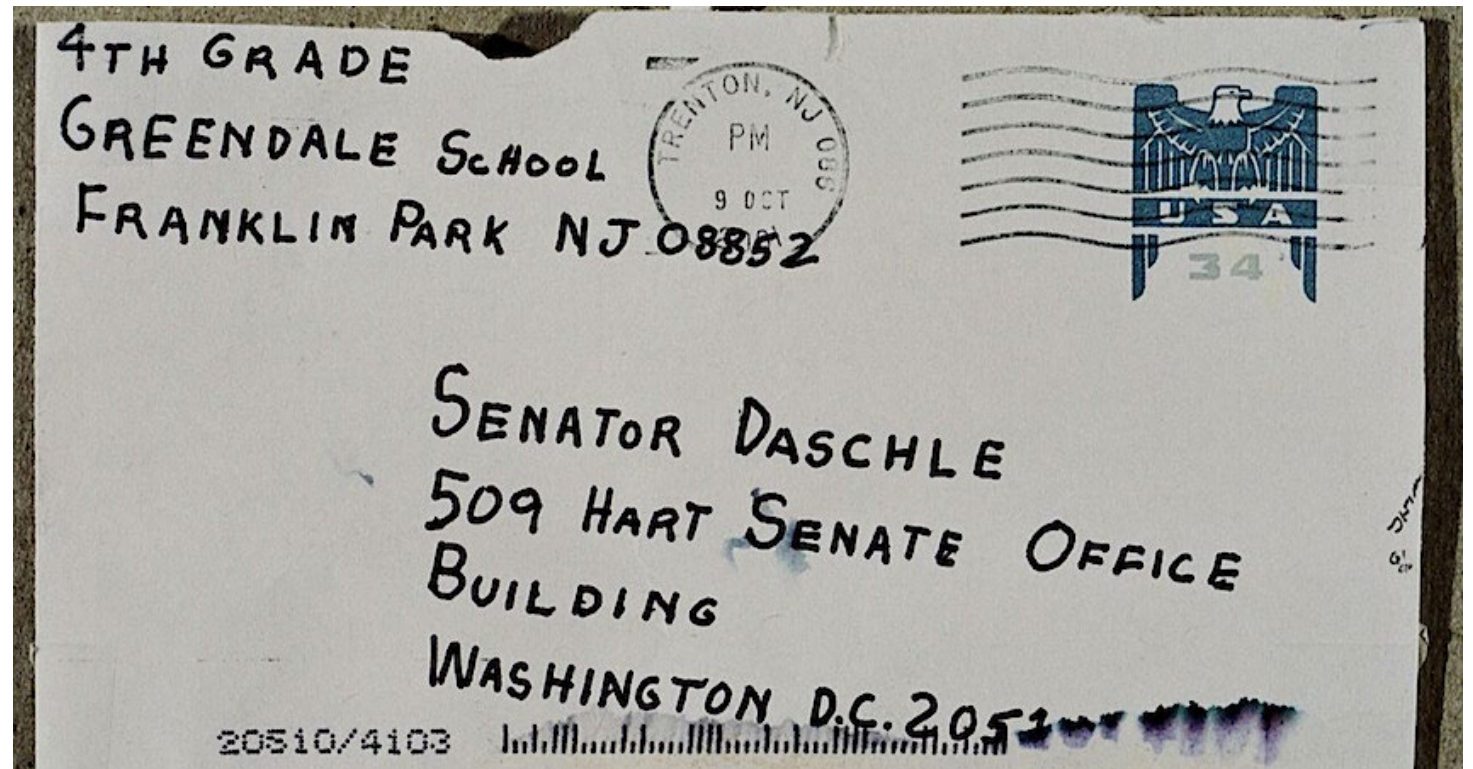


Anthrax Post Exposure/Vaccine

- Cipro 500mg BID for 60 days
- Vaccine prophylaxis
 - BioThrax
 - Cyfendus

Bioterror agent

- Fall 2001: 22 cases (11 cutaneous, 11 inhalational)
 - 5 deaths
 - Spores sent in envelopes in mail system
 - 1/3 cases postal workers
- Spored can be aerosolized and released, undetectable
- Not transmitted person to person



Bioterror agent

- Durable Spores
- Spored can be aerosolized and released, undetectable
- High virulence
- Latency to illness, early illness mimics virus

