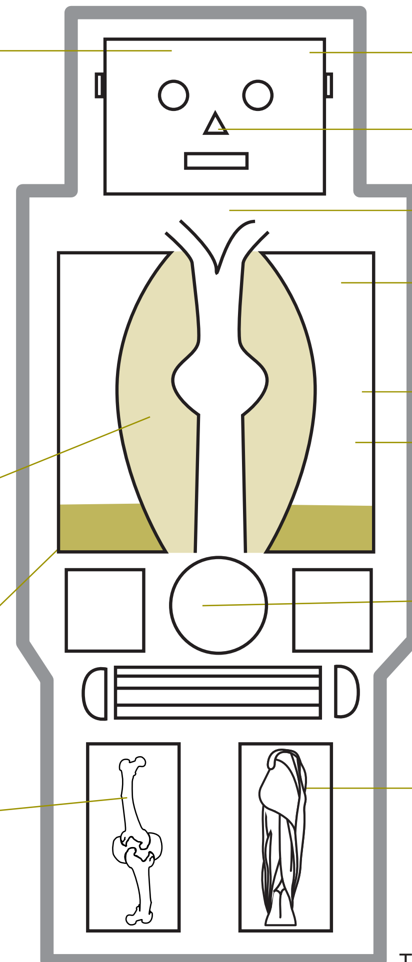
Anthrax (Inhalational) Update 2002

Summary of cases in the USA, 2001 – Recognition & Response

11 Confirmed Cases

- Median Age: 56y (Range 43-94y)
- Mean I.P.: 4d (Range 4-6d)
  - May be inversely proportional to amount of spores inhaled
- Survival: 55%
- Diagnostic Aids
  - Cultures
  - PCR
  - ELISA
- Possible Risk Factors
  - Advanced Age
  - Underlying Lung Disease



Fever, Chills, Profound Fatigue, Drenching Sweats
(Pseudo-Improvement not seen)

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Anthrax (Cutaneous) Update 2002

Summary of cases in the USA, 2001-2002 – Recognition & Response

7 Confirmed Cases/4 Suspected Cases: No Deaths

- No pre-existing skin trauma
- I.P.: 1-10d
- DDx: Tularemia, plague, staphylococcal/streptococcal cellulitis, spider bite, ecthyma gangrenosum, rickettsial infection, necrotic herpes simplex
- Lethality: 20% without Rx
  <1% with Rx
- Diagnostic Aids
  - Gram stain and culture of fluid/exudate
  - Blood Cultures
  - Skin Biopsy
  - PCR
- March 2002 Collateral Damage?:
  Worker at Texas lab, assisting CDC with Anthrax investigation, contracts Cutaneous Anthrax; recovers with antibiotics

MACULE ↓ PAPULE — Pruritic, Tingling
↓ 1-2 Days
VESICLE (some hemorrhagic)
↓
ULCER (surrounded by 1-3mm vesicles)
↓
BLACK ESCHAR

PAINLESS

Edema (possibly extensive) + Surrounding Erythema

1 CASE
7 Month Old Infant

- Renal Insufficiency
- Hemolytic Anemia
- Coagulopathy
- Thrombocytopenia
- Hyponatremia

TM

Fever, Malaise, Headache, Regional Lymphadenopathy

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Anthrax Update 2002

Prophylaxis 2001/2002

1. *Ciprofloxacin/Doxycycline* - First line of therapy
2. *Amoxicillin*
   - Not first line
   - Optimal for children & pregnant/lactating females exposed to penicillin - susceptible strains
3. *Duration Options*
   - 60d
   - 100d
   - 100d + vaccine (3 doses over 4 week period)

Treatment 2001/2002

- Strains sensitive to *Quinolones*, *Rifampin*, *Tetracycline*, *Vancomycin*, *Imipenem*, *Chloramphenicol*, *Clindamycin*, *Aminoglycosides*, *Penicillin*
- Strains resistant to Cephalosporins and TMP/SMX
- Inhalational Anthrax: Multi-antibiotic therapy recommended - *Ciprofloxacin* or *Doxycycline* *plus* 1 or 2 of above
- Cutaneous Anthrax: *Ciprofloxacin* or *Doxycycline* for 60d
- Complicated Cutaneous Anthrax (i.e. systemic symptoms, extensive edema, head/neck lesions, children under 2 years of age) → IV multi-antibiotic therapy as per inhalational anthrax therapy

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