

ANTHRAX

Case definition

CONFIRMED CASE

Clinical illness with laboratory confirmation of infection:

- Isolation of *Bacillus anthracis* in a clinical specimen

OR

- Demonstration of *B. anthracis* in a clinical specimen by immunofluorescence.

PROBABLE CASE

Suspected case with detection of *B. anthracis* DNA

POSSIBLE CASE

Clinical illness in a person who is epidemiologically linked to a confirmed or suspected animal case or contaminated animal product.

Causative agent

Bacillus anthracis is an aerobic, gram-positive, encapsulated, spore-forming, non-motile rod that produces toxins.

Source

Anthrax is a zoonotic disease. Spores of *B. anthracis* are found on hides, carcasses, hair, wool and other by-products of domesticated animals and wild animals such as goats, sheep, cattle, swine, horses, buffalo and deer. Anthrax may also be used as an agent of bioterrorism.

Incubation

- Inhalation: 2-60 days
- Cutaneous: 1-7 days
- Gastrointestinal: 1-7 days

Transmission

Human cases occur after contact with infected animals or their contaminated products. There is also the potential for use by bioterrorists.

Communicability

Inhalation: not transmitted person to person.

Cutaneous: Discharges from cutaneous lesions are potentially infectious.

Symptoms

- Cutaneous: Appearance of small, painless but often pruritic papules. As the papule enlarges, it becomes vesicular and, within two days, ulcerates to form a distinctive black eschar, with surrounding edema.
- Inhalation: Upper-respiratory flu-like syndrome that, after a few days, takes a fulminant course, manifested by dyspnea, cough, tachycardia, chills and a high-grade bacteremia.
- Gastrointestinal: Abdominal pain, nausea, vomiting, bloody diarrhea, fever & signs of septicemia.

Diagnostic testing

Swabs of vesicles, eschar base, blood culture, level 3 organism. Inform lab as special precautions in handling are required.

Treatment

High doses of I.V. penicillin and doxycycline. Ciprofloxacin also is recommended therapy for adults with inhalation anthrax.

PUBLIC HEALTH MANAGEMENT & RESPONSE

Case management

Immediately upon receipt of the report, the investigation should begin.

Case follow-up

If the infection is cutaneous, educate the client on how to handle discharges or any dressings.

Exclusion

Individuals do not have to be excluded, as anthrax is not transmitted person to person.

Contact tracing

If there are individuals who have been exposed to an aerosol they should be contacted and referred for prophylaxis after an assessment is made.

Surveillance forms

novascotia.ca/dhw/populationhealth/surveillanceguidelines/Other_Disease_Case_Report_Form.pdf

novascotia.ca/dhw/populationhealth/surveillanceguidelines/NS_Notifiable_Disease_Surveillance_Case_Report_Form.pdf

General Information Sheet

REFERENCES

cdha.nshealth.ca/pathology-laboratory-medicine

[Provincial Microbiology Users Manual](#)