

Blastomycosis (*Blastomyces dermatitidis*)

DISEASE IN ANIMALS

Blastomyces dermatitidis is a dimorphic fungus that primarily infects man and dogs, though it has also been diagnosed in cats, a sea lion, a dolphin, and a ferret. Most cases are recorded in the U.S., with the majority found along the Mississippi, Missouri, and Ohio rivers.

Reporting: Blastomycosis in animals is not required to be reported to Ohio Department of Agriculture (ODA). Since dogs are ten times more likely to contract *B. dermatitidis* than humans are they are good sentinels of public health risk. Therefore, voluntary reporting of confirmed cases to the [local health department](#) (LHD) is encouraged.

Transmission: Conidia in the environment are contracted through the airborne route. Sandy, acidic soils close to water are conducive to growth and high humidity favors the release of spores. Most cases occur in the autumn in hunting dogs. Direct transmission rarely occurs.

Clinical signs: The majority of cases have lesions in the lungs but they can also be found in the lymph nodes, eyes, skin and joints. Signs include anorexia, weight loss, chronic cough, dyspnea, cutaneous abscesses, fever, and sometimes blindness.

Diagnostics:

- Direct microscopy: sputum, tracheal wash, or exudates from lesions
- Culture and isolation: grows well on Sabouraud's media, 37°C to identify budding yeast
- Histology: biopsy of lesions

Case classification:

- Suspected: a clinical case with signs consistent with blastomycosis
- Probable: a clinically suspect case with laboratory evidence from a screening or unvalidated test
- Confirmed: a case that meets confirmatory testing criteria determined by a state or federal diagnostic laboratory

DISEASE IN HUMANS

Reporting: An individual blastomycosis case is not reportable in Ohio. Outbreaks are required to be reported to the LHD where the patients reside. If unknown report to the LHD of the health provider or laboratory.

Human illness: Symptomatic infection (50% of cases) usually presents as a flu-like illness with fever, chills, productive cough, myalgia, arthralgia and pleuritic chest pain. Some patients fail to recover and develop chronic pulmonary infection or widespread disseminated infection (affecting the skin, bones, and genitourinary tract). Rarely, direct inoculation through a bite or contamination of a wound can cause cutaneous infections which can be locally destructive.

Personal protection: Inhalation blastomycosis infections are sporadic. Prevention is best accomplished by avoiding known sources of environmental contamination. Because of the risk of direct inoculation into a wound, in addition to respiratory protection, gloves should be worn when treating or necropsying animals suspected of having blastomycosis.

FOR MORE INFORMATION

Animal Disease

[Ohio Animal Disease Diagnostic Laboratory
Blastomycosis in Dogs and Cats \(UGA\)](#)

Human Illness

[ODH Infectious Disease Control Manual
CDC Blastomycosis](#)