

Naturalist Report – Blastomycosis

Blastomycosis, or “blasto” as it is commonly known, first came to the attention of PABIA in 2004, as a result of an unusually high incidence of the disease among dogs in the outer islands. Due to misdiagnosis and/or delay in seeking treatment, almost half of the thirteen affected did not survive. Happily, the lone human case reported that year – a 14 year old boy from the station -- recovered without incident.

Since then, there have been no more than two cases – at the most three -- of the canine disease reported annually in our area and, to the best of my knowledge, no human cases. This may be partially a result of the weather, either colder and wetter, or hotter and drier, compared to the warm and humid summer we had in 2004. The notable decrease in reported cases may also be a result of cottagers taking common sense precautions. The improved survival rate for canines is largely attributable to better recognition of the symptoms, which in turn leads to correct diagnosis and prompt treatment.

This update serves as a reminder as to the nature of the disease, its symptoms, treatment, and available means of protection. Blasto is a disease caused by a fungus called *Blastomyces dermatitidis*, which naturally occurs in damp, acid-rich soils, most often associated with rotting wood, leaves, and deposits of animal scat.

A person or dog usually becomes infected by inhaling the spores of the fungus, which are released into the air and under optimal conditions and become attached to dust particles, especially during warm, moist weather if accompanied by soil disturbance such as gardening, construction, relocating an old wood pile, dismantling of a beaver lodge or by dogs routing around animal burrows. Upon inhalation, the spores transform into invasive yeast, which invades the lung tissue, multiplies, and may be transferred to other organs through the blood or lymphatic system. Since contagion can only take place through inhaling the fungal spores, the disease cannot be transferred from dogs to humans or between humans.

On rare occasions, infection may be introduced through an open sore or cut, creating a skin lesion that refuses to heal. In this event, you should avoid direct contact with the lesion if you have a cut or open sore on your hands or arms.

In its canine form, the disease most commonly affects hunting dogs – in our area primarily retrievers, Irish Water Spaniels and Daschunds. Only rarely have cats been affected. Incubation may range from a few weeks to months, which means that symptoms will likely surface towards the end of the summer or in the fall. Parry Sound’s veterinarians are fully apprised of the disease and normally quick to diagnose and begin treatment. However if cottagers have returned home to an area where little is known about the disease, early diagnosis and treatment is more difficult, too often leading to misdiagnosis and improper treatment. The medication is costly and treatment extends over a period of months. Thus if the disease has sufficiently advanced to make survival unlikely, your vet may advise euthanasia.

Since there is no vaccine available and no way of testing the soil, the most important factor for dog owners is be alert to the symptoms:

- persistent cough, often mistaken as kennel cough
- lethargy and disinterest in food
- difficulty breathing
- fever
- sores or lesions that fail to respond to normal treatment

If one or more of the above are present, a visit to the nearest veterinarian is critical, as proper diagnosis and immediate treatment offer the most assured success of recovery.

Most people living in endemic regions for any period of time likely build up a natural resistance without experiencing any major symptoms. Those most susceptible to lung involvement are very young children, the elderly, and those with compromised immune systems from other diseases. To physicians unfamiliar with the disease, symptoms such as chest pain, difficulty breathing, lung congestion and fever may mimic pneumonia or even lung cancer, leading to frequent misdiagnoses and improper treatment which could have fatal consequences. Skin lesions sometimes occur as a tertiary symptom of the infection. With the correct medication, those contracting the disease usually recover without incident if it is not too far advanced and their immune systems not seriously compromised. Regardless, it is important to alert your family physician in advance that you spend summers in an area considered endemic for the fungal growth.

Since Blastomycosis is not a reportable infectious disease in Ontario, it is difficult to estimate whether the disease is actually increasing in the province or just becoming more visible because of accurate diagnoses. The same holds true for the canine form. The regions considered hot spots in the United States are the upper Mississippi and Ohio River valleys, especially Wisconsin. In Canada, those areas considered endemic are the Lake of the Woods region in Manitoba and the Kenora area in northwestern Ontario, with the Georgian Bay shores a distant third.

Given the relative infrequency of contagion compared to a host of other diseases, Islanders can look forward to a carefree, fun-filled summer at their cottages – as long as they are aware of the symptoms. A slightly more complete report will be available on the PABIA website, with links to other sources of information and updates as new information becomes available.

To enable us to keep track of the disease in our area, I would appreciate hearing of any confirmed cases at shelagh.grant@sympatico.ca. You have my full assurance of privacy. Any data received will be used for statistical purposes only, without reference to personal information or specific location.

Shelagh Grant