Pneumocystis Pneumonia in Ferrets: Causes, Signs, Diagnosis, and Treatment

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What causes Pneumocystis pneumonia?

The organism, Pneumocystis, is a fungus that normally lives in the lungs and respiratory tract of people and many animals including ferrets, rats, mice, and monkeys. It can cause disease if the person or animal has a weakened or suppressed immune system. The type of Pneumocystis organisms in different mammals are quite different and appear to be species specific; i.e., Pneumocystis organisms from a rat will not infect a mouse, but will infect another rat. In the past, the name given to the organism which infected humans was Pneumocystis carinii, but it is now known as Pneumocystis jiroveci. It is a common opportunistic infection in people with AIDS. Pneumocystis jiroveci has not been found in nonhuman hosts.

In ferrets, pneumonia caused by Pneumocystis is seen in animals on long-term corticosteroid therapy or with the diagnosis of hyperadrenocorticism.

What are the signs of Pneumocystis pneumonia in ferrets?

Ferrets with pneumonia exhibit labored breathing and fever. The mucous membranes may become bluish in color in severe cases. Many ferrets will become anorexic (not eat) and lethargic. Some may have a nasal discharge.

How is Pneumocystis pneumonia diagnosed?

In animals, diagnosis is generally made by taking samples of the secretions in the trachea and bronchi and examining them under the microscope.

How is it treated?

Ferrets with Pneumocystis pneumonia are treated with pentamidine isethionate, or sulfa antibiotics such as trimethoprim-sulfamethoxazole. Supportive care such as fluids and nutritional supplementation may be required depending upon the severity.

What is the public health significance?

It appears that the type of Pneumocystis infecting humans is not the same as those causing disease in animals. Transmission of Pneumocystis from animals to humans has not been observed.

References


Stringer, JR; Beard, CB; Miller, RF; Wakefield, AE. A new name (Pneumocystis jiroveci) for pneumocystis from humans. Emerging Infectious Diseases. Available from: URL: http://www.cdc.gov/ncidod/EID/vol8no9/02-0096.htm