



Atypical Mycobacteriosis

1.0 Introduction

Atypical Mycobacteria are gram positive, acid fast rods that are non-motile and found throughout the environment. Atypical Mycobacteriosis is also known as nontuberculous mycobacteriosis (NTM). Although anyone can get a atypical mycobacteriosis infection, the atypical Mycobacteria are opportunistic pathogens placing some groups at increased risks, including those with underlying lung disease or depressed immune systems.

2.0 People at Risk

People caring for potentially infected amphibians and fish as well as those performing necropsies on infected animals are at risk for contracting the disease. Immunocompromised people have a greater potential for serious disease symptoms. The disease is very rare in people with normal immune systems.

3.0 Transmission

People may be infected with atypical mycobacteria by inhaling or swallowing infected droplets, or by coming into contact with infected animals or their aquaria. *M. fortuitum*, *M. chelonae*, *M. marinum*, and *M. xenopi* are some of the species that affect fish and amphibians.

Personnel working with fish or amphibians are at increased risk for coming in contact with *Mycobacteria* as well as field researchers sampling wildlife fish or amphibians.

4.0 Symptoms

The signs of atypical mycobacteriosis in humans usually consist of a single lesion (nodule) on hands or fingers at the site of a cut or an abrasion. This usually resolves over time without treatment. Occasionally the organism can spread to nearby lymph nodes, resulting in nodules in the lymph nodes as well as the site of the original infection. Rarely, infection can spread to joints, tendons, and bones. Immunocompromised individuals are more prone to severe infection, and show symptoms of respiratory or generalized disease. The more severe complications of atypical mycobacteriosis can include lymphadenitis (enlarged lymph nodes), and pulmonary disease similar to tuberculosis.

5.0 Prevention, Diagnosis, and Treatment

Diagnosis-Atypical mycobacteriosis diagnosis is based on symptoms and detection of microorganisms microscopically, through histology, and/or cultures.

Prevention-Atypical mycobacteriosis can be prevented by use of gloves when working with fish and amphibians and when cleaning their aquaria. Cover non-intact skin prior to putting on gloves. Always wash hand thoroughly after handling animals and aquaria. Do not store or consume food, take or apply medicine, use tobacco products, or apply cosmetics while working in the lab animal facility where fish or amphibians are housed.

Treatment-Atypical mycobacteriosis is treated by antibiotics.

6.0 Resources

[CDC Atypical Mycobacteriosis link:](#)

For further information related to possible zoonotic disease exposure, or further related resources, please contact UT Occupational Health Nurse Bryan Cranmore RN, COHN at bcranmore@utk.edu, or for urgent response the OHP nurse can be reached at 865-755-8924

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