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Risk communication as a measure to decrease child's morbidity and mortality

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Abstract

Faculty of Veterinary Medicine, Zagazig University, 44519- Zagazig, Sharkia, Egypt Due to recent rapid progress in the development of freshwater aquaculture in Egypt, many new and precedent fish fungal diseases have emerged. Nile tilapia (Oreochromis niloticus) has been threatened by various diseases that have harmful health consequences and prone to mortalities. The infection can be superficial as Saprolegnia spp. that is characterized by focal dermal cottony growth and is the most common in occurrence. While, systemic infection as Ichthyophonus sp. that invades the highly vascularized organs impairing their functions, Branchiomycosis is a devastating disease that affects gills obstructing blood flow. Saprolegnia spp. was identified through the morphological characters of culture on Sabouraud's dextrose agar media (SDA) and histopathological examination of tissue. Surprisingly, Saprolegnia spp. grew on Eagle's Minimum Essential Medium (MEM) at pH 7.0 only giving zoospores. Ichthyophonus sp. was isolated and is characterized by spherical double-walled multinucleate schizonts that are verified in squash preparations from infected internal organs (liver, spleen, and kidneys) and tissue sections. Additionally, it developed two different forms of growth on MEM depending on culture medium pH. Branchiomyces spp. exhibited different stages of growth in gills and so appeared congested, paled, white-colored or marbled according to the progress of infection. A key diagnostic feature to genus Branchiomyces is the branching of hyphae at their tips with the first report for a description of such branching in compression techniques from gills. Also a microscopic examination of fungal culture aids in the identification. Herein, we report Branchiomyces sanguinis for the first time and Branchiomyces demigrans in Nile tilapia in Egypt. Both species are distinguished based on the shape and diameter of hyphae in compression techniques from infected gills as well as the diameter and location of spores in histological sections. Koch's Postulate confirmed the identity of the investigated pathogens. The current research represents the first comparative mycological and histopathological study for Saprolegnia spp., Ichthyophonus sp., and Branchiomyces spp. as well as their prevalence in wild and cultured Nile tilapia throughout the different seasons in Egypt.

Biography:

Dr. Noha S. Hassan, is a public health consultant and medical epidemiologist. She has started her medical career as a pediatric resident in Ismailia General Hospital in Egypt, then later, she shifted to public health where she finished her Master's and Medical Doctorate in public health, in addition of being a graduate of the Field Epidemiology Training Program. Dr. Hassan has worked in the Preventive Medicine Sector at the Egyptian Ministry of Health and Population for more than 7 years where she established the unit of risk communication which was one of the first specialized units in risk communication in the region.

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