



Approaches of Zoonotic Diseases Caused by Several Pathogens and Detection of Endemic Areas including Affected Humans and Animals

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ABOUT THE STUDY

Zoonotic diseases are diseases or infectious diseases that can be transmitted naturally from vertebrates to humans or from humans to vertebrates. Over 60% of human pathogens are derived from zoonotic diseases. These include a variety of bacteria, viruses, fungi, protozoa, parasites and other pathogens.

Zoonotic diseases are caused by various pathogens. Based on etiology, They are classified into Viral zoonotic diseases (Rabies, acquired immunodeficiency syndrome-AIDS, Ebola and avian influenza, etc.), parasitic zoonotic diseases (trichinosis, toxoplasmosis, trematosis, zoonotic diseases, malaria and echinococcus) Diseases, etc., fungal zoonotic diseases, zoonotic diseases, rickettsial zoonoses, chlamydia zoonotic diseases, mycoplasma zoonotic diseases (mycoplasma pneumoniae Infectious diseases), zoonotic diseases of protozoa, and diseases caused by acellular nonviral pathogens (eg, infectious spongiform encephalopathy and mad cow disease) etc [1].

Zoonotic bacterial disease

Zoonotic bacterial diseases are very commonly transmitted between animals and humans. Global climate change, the abuse of antibiotics in medicine, more intensive agricultural facilities, and closer interactions with animals are driving the emergence or recurrence of bacterial zoonotic infections.

Viral zoonotic diseases

Zoonoses are a disease transmitted from non-human vertebrates to humans. Mammals, birds, reptiles, and perhaps amphibians, are reservoirs or amplification hosts for viral zoonotic diseases. In many cases, these viruses cause little or no overt illness in non-human vertebrate hosts [2].

Parasitic zoonotic diseases

Many parasitic zoonotic diseases, such as cryptosporidiosis, toxoplasmosis, and leishmaniasis, are attracting attention as human pathogens because of their ability to cause disease in HIV-suppressed patients. The management and prevention of

these zoonotic diseases is complex and requires an integrated interdisciplinary approach based on in-depth epidemiological studies to understand the variables that influence disease development and transmission [3].

Trichinosis zoonotic diseases

Trichinella is a zoonotic disease caused by "trichinosis". The disease is occurring all over the world. Many animals can act as vector animals, but pigs and horses are most commonly associated with human infections. In Europe, wild boars are also involved [4].

Toxoplasmosis

Toxoplasmosis is a disease caused by infection with Toxoplasma gondii, one of the most common parasites in the world. Infections are usually caused by poorly cooked contaminated meat consumption, exposure of infected cats to feces, or mother-to-child transmission during pregnancy.

Trematodosis zoonotic diseases

Zoonotic diseases are common in almost every country and cause severe debilitating helminthiasis with approximately 75 million people and billions of dollars in production losses in the livestock industry. Both humans and animals in the absence of new approaches to assess new biomarkers and pesticides based on genomics, transcriptomics, and proteomics in terms of global warming, habitat loss, and adaptation to new host ranges. It is suggested that the host has an increased incidence of zoonotic trematodosis [5].

Giardiasis zoonotic diseases

Giardia lamblia cause giardiasis in humans and most mammals. Therefore, giardiasis is considered a zoonotic disease. The life cycle of Giardia is direct, and the cyst, which is the stage of infection of the parasite, is encapsulated when released into the faeces and becomes infected immediately [6].

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Fungal zoonotic diseases

Fungal infections associated with zoonotic diseases are a major public health concern worldwide. Some of these infections belong to the most common group of fungal diseases. Examples: Dermatophytosis, Sporotrichosis, Histoplasmosis.

Chlamydia zoonotic diseases

Zoonotic diseases are infectious diseases that can be transmitted from animals to humans. The most well-known zoonotic pathogen is now *Chlamydia psittaci*, the causative agent of psittacosis. Many outbreak reports have been published, but the exact prevalence or incidence is unknown.

Mycoplasma zoonotic diseases

Hematogenous mycoplasma infections are still neglected zoonotic diseases, especially in China, which pose a threat to public health and the animal industry. Prevalence of livestock (such as pigs) and human diseases has reached amazing levels.

Protozoal zoonotic diseases

Protozoan parasites of zoonotic diseases, including toxoplasmosis, Shagas disease, Babesia disease, giardiasis, and leishmania, can cause insidious infections that can infect asymptomatic animals. *Giardia* and *Toxoplasma gondii*, which are endemic to the United States, are common in livestock.

CONCLUSION

Monitoring is essential to prevent and manage zoonotic diseases. It can be used to detect endemic areas including early infections,

affected humans and animals, reservoirs, vectors, and "hotspots". It helps adapt management strategies for emerging and re-emerging infectious diseases to improve human health, properly treat illnesses, and minimize morbidity and mortality in humans and animals. Zoonotic diseases (such as SARS and HPAI) spread rapidly around the world and can affect communities around the world, so zoonoses can be managed locally, regionally, nationally, and. A coordinated surveillance approach at the international level is essential.

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