

THE MOST FREQUENT ZONOSES FOUND IN CATS IN ORADEA

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RESEARCH ARTICLE

Abstract

This study was conducted in collaboration with several clinics in Oradea. This paper discusses the most common diseases transmissible from cats to humans following a research in Oradea. The most well-known zoonoses that can occur can be: parasitic (giardiasis, toxoplasmosis), bacterial (cat scratch disease caused by Bartonella), viral (rabies) or fungal (microspora).

Keywords: Microsporum canis, fungal skin infection, intense pruritus, circular erythema, transmission, direct/indirect contact

INTRODUCTION

Dogs and cats can spread various zoonotic diseases to humans, with some of these being potentially fatal. Zoonosis refers to an infectious illness that has transferred from a nonhuman animal to people.

Zoonotic pathogens can be bacterial, viral, or parasitic, or may include unconventional agents, and they can transmit to humans via direct contact or through food, water, or environmental means. They pose a significant public health issue globally because of our close ties with animals in farming, as pets, and in the wild.

Zoonotic diseases linked to cats encompass rabies, capnocytophagosis, pasteurellosis, cat scratch disease, ringworm, plague, Q fever, and external parasites, along with campylobacteriosis, salmonellosis, cryptosporidiosis, giardiasis, toxoplasmosis, and MRSA. Zoonotic disease transmission from pets mainly occurs through direct contact, ingestion, indirect contact via insect vectors and contaminated surfaces, or inhaling aerosolized substances.

When interacting with seemingly healthy animals, maintaining good hygiene (such as hand washing) is a crucial precaution. Washing hands is especially crucial prior to eating or any other contact involving the mouth. Hand-washing stations should be available in fairs, petting zoos, or other places where people may interact with animals, and consuming food or beverages in animal zones should be discouraged.

Measures to safeguard veterinary hospitals comprise barrier precautions (such as gloves, protective clothing, and other suitable personal protective equipment), proper

hygiene, sanitation and disinfection practices, correct disposal of infectious materials, and utilization of isolation units for animals confirmed to have zoonotic diseases.

This study was conducted in collaboration with several clinics in Oradea and discusses the most common diseases transmissible from cats to humans in Oradea.

MATERIAL AND METHOD

The materials used were those most readily available in the clinics that participated in the study, namely laboratory equipment consisting of slides, microscope, Wood's lamp (UV light), blood analyzers, Yolexx hematology and biochemistry analyzers, and rapid viral tests.

The more laborious analyses were sent to large laboratories in Bucharest for microbiological cultures, namely fungal cultures - these were collected from hair strands and placed on a DTH culture medium - and bacterial cultures from blood or faeces followed by antibiogram where appropriate and from blood for PCR tests.

As for the methods used in the clinics in Oradea, they were clinical, based largely on anamnesis and discussions with cat owners, followed by the proposed clinical examination, based on the clinical signs appearing in the cat, either on the skin, pruritic erythema, or diarrhea, vomiting, lethargy, apathy, or sometimes asymptomatic.

To identify fungal zoonoses, hair samples were collected from the affected areas during the clinical examination and subsequently examined under a microscope. The Wood's lamp was also used to examine the areas of skin

changes observed during the clinical examination.

All these methods are non-invasive and do not cause stress to the cats. For parasitic areas, coproparasitological methods were used through microscopic analysis to identify parasitic eggs or cysts. Other methods used were ultrasound and radiographic examination for systemic diseases or other lesions caused by migratory parasites. All these methods combined helped to make a definitive diagnosis in order to establish the appropriate treatment and, very importantly, prevention.

RESULTS AND DISCUSSIONS

With the help of veterinary clinics that agreed to participate in this study, 100 cats were examined between January 2025 and October 2025. It should be noted that only cats with owners were taken into account for this study, not stray cats.

Cats with owners are at a significant advantage over stray cats, as they are considered to be constantly and periodically dewormed internally and externally according to each clinic's protocol, thus the risk of zoonoses being significantly lower compared to stray cats.

Among the known zoonoses, the highest percentage during the period under consideration was obtained by a mycotic zoonosis caused by *Microsporium canis*, the frequency being higher due to its high contagiousness. The parasitic zoonosis caused by *Toxoplasma gondii* had a much lower percentage.

In terms of symptoms, this parasitic disease can be asymptomatic, being diagnosed mainly through paraclinical tests. Also in this category of parasitic zoonoses, tapeworms, more specifically *Dypilidium*, were also found, but in a very small percentage.

CONCLUSIONS

The highest percentage of zoonoses was caused by the fungal disease produced by *Microsporium canis*, at 30%, followed by a parasitic disease produced by *Toxoplasma gondii* at 5%, and cases of tapeworms produced by *Dypilidium* at 2%. The rest of the cats were healthy, both from a clinical point of view and according to the tests and analyses performed.

It should be noted that all three diseases can be prevented by vaccination in the case of microspores, but this prevention is less well known among cat owners, and internal and external deworming according to the

veterinarian's protocol for the other two zoonoses encountered.

The recommendation is, of course, to carry out regular vaccinations, and also internal and external deworming in order to prevent the risk of these zoonoses occurring.

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