

Popular Article

Pets to Humans, most common skin diseasePriyanka Kumari Sharma¹, Sakshi^{2*}, Prachand Pratap Singh¹,
Monalisa Sahoo³¹Division of Parasitology, ICAR-IVRI, Izatnagar, Bareilly²Division of Medicine, ICAR-IVRI, Izatnagar, Bareilly³ICAR-DFMD-International Centre for Foot and Mouth Disease
Arugul, Jatani, Bhubaneswar, Odisha-752050

***Corresponding author: Sakshi, Email: sakshikurim@gmail.com**

Introduction

As we are well aware, our surrounding is full of infectious and non-infectious harmful agents. Among these, our loved ones like our pets are considered one of the most important sources for that. Actually, how we interact with our pets decides our health interaction. During interaction, we use to forget that many zoonotic diseases like Rabies, Leptospira, and Pasteurella etc. can be acquired from our pets and sometimes can be fatal too. It's not like we can't avoid these, but our negligence decides our fate, which ruins your bond with your pets. For a better or healthier relationship, we need to know many things about zoonotic diseases like how they are transmitted, by which route they can spread and what precautions we can take to avoid that.

Transmission

The diseases can be transmitted in many ways directly through saliva, urine, faeces, touch and indirectly through aerosols, vectors, etc. The diseases which are transmitted through saliva includes rabies, Pasteurella, and Capnocytophaga; urine includes Leptospira; faeces include Salmonella, Giardiasis, Noro Virus and

Campylobacter; many skin-related diseases like sarcoptic mange, ringworm by fungus and pyoderma by Staphylococcus transmitted directly from dogs to human: aerosols included a range of infection like Q fever (*Coxiella burnetii*), Bordetella, Canine influenza, Pasteurella, etc. Diseases transmitted through tick bite include Lyme disease, Ehrlichiosis, etc.

Sarcoptic mange (Scabies)

This is one of the most common zoonotic skin diseases of dogs caused by Sarcoptic scabiei mite, it can affect dog of any age and is easily transmissible between dogs by direct contact as it is highly contagious. It can also be transmitted by the various things like combs, towels, brushes, clothes, etc which we use to take care of our pets. It is a widely prevalent disease spread worldwide. The mites are very small and microscopic and have four pairs of small legs. Mites also have various spines on the surface. Females are almost twice larger than males. Female mites burrow itself into the skin (Stratum corneum layer) of animal and lay eggs and moult there. The cells layer of skin starts multiplying or increases in size due to movement of mites or various waste products released by the mite and it will lead to extensive thickening of the skin.

Clinical signs

Intense pruritus due to the movement of mites and other factors, dog will continue to rub and chew its skin or scratch it. At the place of thickening or itching, there will be alopecia, broken hairs, papule and crust formation. Secondary bacterial infection may develop as opportunistic pathogen. Mainly the lesions will be visible on lower abdomen part, hocks, chest, ears, elbow but can be generalized if not treated on time. In generalized form/Chronic form there will be complete thickening (several fold) of the skin, crustation and animal will be emaciated. In several cases animal may die.

Diagnosis

Mainly by history of intense itching, exposure, or close contact with other animals even humans. Confirmative diagnosis is by skin scraping examination for the mite but sometimes it becomes difficult due to negative skin scrapings. So scrapping should be deep enough that blood oozes out from skin and then repeated skin scrapings should be there so that we can avoid false negative results. Under the microscope, you can easily recognize adult mites by their nearly circular shape and 0.2-0.6 mm long with four pairs of legs which are short. Female mites are twice the size of males and have triangular spines on their surface. Some molecular test like ELISA and PCR based on specific antigen has also been developed and may be helpful.

Treatment

It can be range of oral medications, injectables, applications, medicated bath and dips etc. Pets can be best treated with a combination of different drugs. Amitraz

and Lime sulfur can be used as dips but nowadays it's not that frequent. Various topical applications include medicated shampoo having benzoyl peroxide that will help penetrate drugs properly under the skin other ways to improve penetration is to clip the hairs and remove dirt first. Macrocytic lactone like Selamectin as spot on formulation and others include Moxidectin, Fipronil, milbemycin oxime and various other drugs in combinations can be used, but these should be applied on the skin after complete drying and should be given for longer duration up to one month. Nowadays drugs from the isoxazoline class shown to be effective like Fluralaner, afoxolaner, and sarolaner.

Prevention

First of all to prevent re-infection discard the bedding of your pets, maintain hygiene, avoid contact of your dog with other animals, also avoid exposure of yourself with the pet or if you have any itching then contact your doctor.

Ring Worm

By name, it sounds like it's a worm but it is a contagious skin infection caused by mold-like fungus that mainly affects skin, nails, and hairs.

Transmission

From any person infected with it, from another animal who has infection and stay in the vicinity of your pet, from any objects that are used for an infected person or animal.

Clinical signs

You will notice small red

patches/rashes on your skin looks like circumscribed ring shaped with clearly visible margins, you will feel itching and burning, sometimes skin may inflammed and become rough due to scaling, there will be hair loss in patches at the place of lesions almost same lesions will be noticed in animals.

Diagnosis

It can be easily diagnosed with visible ringworm signs and for confirmatory diagnosis, some microscopic tests based on the skin scraps are the KOH test and Wood's lamp test.

Treatment

Topical antifungal agents such as, cream, lotion, ointment should be applied on affected areas. If your infection is severe your doctor may prescribe systemic antifungal drugs. Similarly for your pet too go to a veterinarian and he will prescribe a suitable treatment like: antifungal agents to apply and shampoo etc.

Prevention

Maintain proper hygiene like washing your hands regularly, avoiding contact with infected persons as much as possible, and giving regular baths to your pets using soap/shampoo recommended by a veterinarian. Maintain hygiene in your nearby places, Keep your pet clean and dry, don't share objects among your pets if you have more than one, wash your hands properly after playing with your pets avoid contact if it's having an infection and take doctor's help.