



Cat Scratch Fever

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Cat scratch disease is a bacterial infection that affects humans from cats infected with a bacterium called *Bartonella henselae* bacteria, and this occurs if the cat bites or scratches this person, or if the cat's saliva comes into contact with an open wound or the eye of the infected, and the infection may be transmitted through insects, the infection between humans cannot be transmitted to each other. Initially, it was thought that the bites (the organism causing the disease) is the bacterium *Afipia felis* but this belief has been denied by immunological studies that have shown that patients with cat scratch disease have developed antibodies to other organisms (the two types of bacteria that cause this disease), *Bartonella Henselae* and *Bartonella Clarridgeia*, two gram-negative bacteriums. Young cats are also thought to carry bacteria in their blood and are therefore more likely to transmit the disease than adult cats. Symptoms begin to appear 3-14 days after exposure to the infection, appear as redness or swelling at the site of infection, may be accompanied by pain at the site of infection, and may also be associated with fever. People with low immunity are more likely to develop the disease, such as people with diabetes, HIV, cancer or organ transplants.

Cat scratch fever causes

Risk factors for cat scratch disease Cat scratch disease is caused by exposure to scratching or biting by a cat infected with *Bartonella henselae* bacteria, and the infection may also be transmitted through an infecting insect. It was concluded that feline blood is considered a carrier of the disease in 1950 by the scientist Robert Debli and it was concluded that the disease is transmitted between cats through its carrier organisms including ticks, fleas, and spiders. The disease can be transmitted to humans through ticks. The transmission of the disease between cats is often carried out through fleas where pollination is carried out inside the skin. Research based on PCR has also shown that other organisms

can transmit *Bartonella* bacteria. There are several factors that increase the risk of cat-scratching disease, as all those who own cats are at risk of cat-scratching disease, and children are more likely to develop cat scratch disease. One of the most important factors that increase the risk of cat-scratching disease is low immunity such as AIDS patients, cancer patients, diabetics, and organ transplants.

Cat scratch fever symptoms

Cat scratch disease appears as painful lymph nodes when touched, festering blisters at the place where bacteria enter. Most cases are non-serious self-healing, but the affected lymph nodes may remain for several months after the other symptoms disappear. The development of the disease towards a good recovery in regions with a temperate climate, most cases appear in autumn and winter. The disease usually heals spontaneously with or without treatment, within one month. Sometimes serious complications may appear in patients with weakened immunity. In rare cases, cat scribble can lead to the development and occurrence of serious neurological or cardiac infiltration such as encephalitis, encephalitis, seizures, and endocarditis (inflammation of the inner layer of the heart) which has a high mortality rate. Symptoms often appear 3-14 days after the bite, and common symptoms of cat scratch disease include*: Protrusions and blisters at the site of the bite or scratch. Swelling of the lymph nodes near the bite, scratching or around the head and neck, and the upper limbs occur one to 3 weeks after the bite or scratch. General fatigue. Headaches. Low grade fever. Body aches.

Less common symptoms include* the following

loss of appetite. Weight loss. Sore throat.

Rare symptoms include Back pain. cold chills; Abdominal pain. Joint pain. Rash. Long-term fever. Sore throat Enlarged spleen *It is advisable to see a doctor*, if one of these symptoms is observed:

swelling or pain in the lymph nodes. If redness around the wound expands. Fever. Pain in the bone or joints, abdominal pain, or excessive fatigue for more than two or three weeks.

What is the physiology of cat scratch disease?

Cats can become infected with the bacteria that cause cat scratch disease from flea bites and flea droppings that go into their wounds. By scratching and biting fleas while cleaning their fur, cats pick up infected flea droppings under their nails and between their teeth. Cats can also become infected by fighting with other cats infected with the disease. The germ spreads to humans when infected cats bite or scratch a person with enough force to cause a wound in their skin. The germ can also spread to humans when infected cats lick wounds or scratches that they may have.

How is cat scratch disease diagnosed?

Clinical examination by observing the symptoms and signs visible on the patient at the site of the bite or scratch. A blood test (Polymerase chain reaction PCR), a blood test to confirm whether or not bacteria are present in the body. *There are five criteria for diagnosing cat scratch disease* - the presence of local inflammation in the lymph nodes in the absence of pathogens and determinants. - Exposure and direct contact with animals, especially cats and dogs, and the story of licking, biting or talking to the animal. - It is often seen that there is primary skin damage caused by cats or the presence of primary conjunctivitis without itching. - Proving the existence of bacteria by cultivation although this type of bacteria is difficult to grow. - By performing serological immunological tests, or investigating the presence of DNA in the blood by means of special tests in the blood, the presence of multiple abscesses in the surface cells.

Cat scratch treatment

The cat's scratch disease does not need treatment, but in 5 to 14% of infected individuals, germs spread and damage the liver, spleen, eye or central nervous system. In severe cases or in people with weakened immunity the infected person will need treatment. Treatment of cat scratch disease includes the following: - Wash the scratch or bite site thoroughly with soap and water. Take over-the-counter painkillers to help relieve pain and discomfort. - Use heat compresses on the affected area to relieve pain. Take antibiotics if symptoms persist for a month or two. In rare cases, the infection can spread to the bones, liver, or other organs and this requires

more intensive treatment. The effects of a bite or scratch may last between one to three weeks, and the case of swollen lymph nodes may take two to two months A year or more. - Some experts advise not to treat cat scratching in patients with weakened immunity with mild to moderate disease and suggest treating all patients with antimicrobial agents (2B) due to the possibility of spreading the disease. The antibiotic of choice for treatment is *azithromycin* because it is the only one studied in a controlled study, as well as used in pregnancy to avoid side effects of other antibiotics that treat the same disease as *doxycycline* where it has the ability to penetrate tissues in the eye and central nervous system adequately.

How can cat scratch disease be prevented?

To avoid cat's scratch disease, especially for those who own cats, the following are recommended: - Avoid playing with the cat as much as possible and avoid street cats. - Keep the cat's nails cut to avoid any scratching. - Wash your hands after playing or handling the cat. Avoid approaching the cat to any open wound or to your eyes. Keep your cat at home, keep it clean and protect it from fleas. * It is recommended to buy older cats, especially for those with low immunity, because kittens are more likely to be infected with the bacteria of cat-scratching disease.

Complications of cat scratch disease

Cat scratch fever multiples It is rare to have complications of cat scratch disease, and complications that may occur

- Encephalopathy: Encephalopathy is caused by the arrival of bacteria to the brain, and this may lead to permanent damage to the brain and may lead to death.
- Optic and retinal neuritis: Inflammation of the optic nerve and retina occurs when bacteria reach this nerve, and may lead to blurred vision, and symptoms recover when treating inflammation.
- Osteomyelitis: Osteomyelitis is a bacterial infection of the bones and can lead to bone damage. In severe cases the doctor may resort to amputation of the affected part.
- Parinaud's oculoglandular syndrome: Parinaud's oculoglandular syndrome is caused by bacteria entering the eye directly or by moving it into the blood to the eye. The disease can recover once the inflammation is treated, but in severe cases a person may need surgery.