a Queensland Health fact sheet

Toxoplasmosis

Description:

Toxoplasmosis is a disease caused by a parasite called Toxoplasmosis gondii which is usually found in cats and other mammals and birds. Infection with toxoplasmosis in healthy people generally does not cause symptoms with only 10 to 20% of healthy adults developing symptoms. Toxoplasmosis occurs worldwide and is found in mammals, especially cats and birds. Infection in humans is common. It has been estimated that 30% of humans are infected ranging from 5% to 90% in different localities.

Symptoms:

If symptoms do develop, it is usually a mild illness with fever, headache, muscle aches and enlarged lymph nodes. Toxoplasma cysts may remain in the tissues after the initial infection. These cysts contain organisms that can be reactivated if the immune system becomes weakened, such as in patients with HIV/AIDS. In people who have a weakened immune system, the initial infection, or infection that results following the reactivation of tissue cysts persisting after an old infection, may affect the brain, lungs, heart and skeletal muscle, eyes and skin. These infections may lead to death.

Infection in pregnancy may lead to foetal infection of the foetus in the womb. Early in the pregnancy, this can cause multiple problems including brain damage, damage to the eyes, fever, enlargement of the liver and spleen, jaundice, rash, and even death of the foetus. Later in the pregnancy, toxoplasmosis can cause mild disease and delayed reactions such as eye problems. Toxoplasmosis is a very severe infection for unborn babies and for people with lowered immunity.

In people who have a healthy immune system, symptoms, if present, usually resolve within a few months. In patients with a weakened immune system, the disease may be prolonged and lead to death.

Transmission

The time it takes to develop the illness ranges from 10 to 23 days from eating undercooked meat to five to 20 days from cats. People who have contact with cats and cat faeces or consume undercooked meat are at risk of being infected. Infected cats shed parasites in their faeces as cysts. These cysts are not infectious immediately but become infectious one to five days after being shed into the environment. Infections may be acquired by eating infected cysts. This can happen when cleaning cat litter, through contaminated food or water, and through inhaling contaminated dust. Children can catch toxoplasmosis by playing in sandpits where cats have defecated. The parasite is also common in animals including pigs, cattle, sheep and chickens. Infection in humans may also be acquired by eating undercooked meat or vegetables containing parasites.

A pregnant woman can transmit the infection to her foetus if she has a primary infection during the pregnancy, or if there is reactivation of the disease because she has a weakened immune system from another cause (eg. HIV/AIDS) during her pregnancy. Toxoplasmosis is not transmitted directly from person to person, except if a mother transmits the disease to her foetus during pregnancy. Treatment is not routine for healthy individuals who develop toxoplasmosis with symptoms, except pregnant women or people who develop complications such as an eye infection.

Treatment:

Antibiotic treatment is available for significant infections, including treatment during pregnancy if necessary. There is no vaccination to protect against infection with toxoplasmosis.

A pregnant woman who has exposure to cats and develops any of the symptoms described above should contact her doctor.

Health Outcome:

The parasite occurs worldwide, and infection is very common. Toxoplasma infection usually does not cause any

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symptoms. If the immune system is severely damaged, for example by AIDS, organ transplants, or treatment for some cancers, the parasites in the cyst may reactivate and can cause serious illness.

Prevention:

Persons with weakened immune systems and pregnant women should be particularly careful to avoid contact with cat faeces and soil, and to avoid eating undercooked meats and vegetables. Cook meats until well done. Wash fruit and vegetables well before eating .Eliminate cross-contamination from raw foods to cooked foods by thoroughly washing hands, cutting boards, knives and other utensils.

Pregnant women should avoid cats and should not empty litter containers. Cat litter should be thrown out every day. Wear gloves when handling potentially contaminated materials, like soil and cat litter. Cats can become infected from eating raw meat and from eating wild rodents, birds and raw or undercooked kitchen scraps. To prevent this, feed only commercial dry cat food or well cooked meats. Sandboxes should be covered when not in use.

Help and Assistance

For further information, please contact your local doctor, community health centre or nearest Population Health Unit.

Footnotes

Heymann, D., ed. 2004. *Control of Communicable Diseases Manual*, 18th edition. Washington, DC: American Public Health Association, pp 538-541.

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Mandell,G.L., Bennett,J.E., Dolin,R.,eds. Principle and Practice of Infectious Diseases, 6th edition. NewYork: Churchill Livingston, 2005:3171-2475.

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