

Hydrophobia is still not a disease of past

Written by PHILIP S. CHUA, M.D., FACS, FPCS
Monday, 09 December 2013 12:52



WHAT is hydrophobia?

Hydrophobia is the medical term for rabies, an acute infectious disease of mammals, especially the carnivorous ones, characterized by pathology in the central nervous system, leading to paralysis and death.

The most common source is the bite of a rabid dog.

Why is it called hydrophobia?

Rabies is medically termed hydrophobia (fear of water or any liquid) because with the onset of paralysis, which also affects the oropharyngeal muscles and the swallowing and breathing centers in the brain, the person infected with rabies is unable to swallow, especially liquid, and has the sensation of choking when they try to drink.

What is the cause of rabies?

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Rabies is caused by a neurotrophic (nervous system invading) virus, which is present in the saliva of rabid animals.

Rabid animals transmit the disease by biting other animals or humans.

Hydrophobia in dogs is prevalent in Asia, Latin America and Africa.

In the United States effective vaccination programs have largely eliminated canine rabies, but since the 1960s, bites from wild animals, like bats, have resulted in the infrequent cases of human rabies in America.

How does the virus spread?

With the bite of a rabid animal, the virus in the saliva of the infected animal is injected into the victim, preferentially goes to the peripheral nerves and travels to the spinal cord and brain, where it rapidly multiplies, and goes to the salivary gland and saliva.

The brain and its covering develop hemorrhages, which leads to the paralysis.

What animals are commonly afflicted?

Dogs, cats, bats, livestock, skunk, raccoons, foxes, rodents, rabbits.

Practically any animal that is bitten by a rabid one can potentially transmit rabies.

What is the incubation period of rabies?

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The incubation period (time from the bite to the appearance of symptoms) of hydrophobia in humans varies from 10 days to a year, with an average of 30 to 50 days.

Some strains outside of the United States may have longer incubation period but bites in the head and trunk have the shortest incubation period.

What are the symptoms of rabies?

The disease usually starts with depression, restlessness, fever and malaise.

The restlessness grows to an uncontrollable excitement, with excessive salivation and excruciatingly painful spasms of the laryngeal and pharyngeal muscles when attempting to swallow.

There is also a reflex irritability of the swallowing and breathing centers in the brain, when swallowing liquid.

The patient is usually very thirsty but has extreme fear of water.

Similar signs and symptoms can be seen in animals infected with rabies.

Are pet dogs and cats immune to rabies?

No, they are not immune from getting rabies infection.

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This is why veterinarians strongly recommend pets to have anti-rabies vaccination regularly, besides other prophylactic (preventive) medications for heart worms, etc.

Can a rabid animal transmit rabies by licking?

Experts say no, licking by a rabid animal does not transmit rabies unless there is a break in the skin area where the rabid animal licks.

Intact mucus membrane (lining of the eyes, nose, mouth) contamination with saliva of a rabid animal does not cause rabies.

The most prudent thing to do is to consult your physician if this happens, because there are other factors to consider.

Can human bite cause rabies?

Yes, most definitely, if the person biting has contracted rabies.

As in animals, the virus is found in saliva of humans who are rabid.

Therefore, a person who develops rabies (from a rabid animal bite) can certainly transmit rabies by biting a fellow human or an animal.

How is the diagnosis made?

There was a time when the brain of the infected animal was microscopically examined for Negri

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bodies (intra cellular inclusions diagnostic of rabies) but modern diagnostic technique today uses fluorescent antibody test and virus isolation.

If bitten by a pet, what has to be done?

If the biting pet dog or cat has no exposure to a rabid animal and it has no symptoms, it is recommended that the pet be confined and observed by a veterinarian (if practical) for 10 days.

If the animal remains healthy, it means it was not rabid at the time of the bite.

If the pet develops symptoms, it should be sacrificed right away and its brain examined immediately, because it must be proved that the animal was not infected with rabies before deciding that treatment of the person is not needed.

Does local wound care help after a bite?

Even if the bite is by a rabid animal, human rabies rarely occurs if proper and aggressive local wound care and systemic (passive immunization) therapy is immediately instituted after exposure (bite).

Local wound care is most essential as a preventive measure for the actual development of rabies.

The bitten area must be instantly cleaned thoroughly with soap and water, or benzalkonium chloride.

Go to the nearest emergency room for more definitive treatment.

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Administration of rabies immune globulin for passive immunization followed by human diploid cell rabies vaccine (HDCV) or rabies vaccine, adsorbed (RVA) for active immunization, provides the best therapy for post-exposure prophylaxis.

Both the passive and active vaccines should be used concurrently, given at different sites of the body.

How about pre-exposure vaccination?

Those persons who are at high risk of exposure to rabid animals (veterinarians, animal handlers, laboratory workers who work on rabies virus, etc.) may be given prophylactic immunization (HDCV and RVA) since these vaccines are relatively safe.

What is the prognosis of the victim?

If all preventive measures mentioned above (local wound care and systemic therapy with vaccines, etc.) fail, death from asphyxia, exhaustion or general paralysis, often follows within three to 10 days after the onset of symptoms.

However, there have been rare reports of recovery after very aggressive, vigorous supportive care, to control breathing, circulation and central nervous system symptoms.

If rabies develops, treatment is mainly symptomatic to keep the patient comfortable.

This deadly disease is best prevented.

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