

Cercopithecine Herpesvirus-1 (B-Virus) Infection

Q. What is B-Virus?

- A. Cercopithecine Herpesvirus-1, also known as B-Virus, is a member of the herpes group of viruses that occurs naturally in Macaque monkeys and possible in other Old World monkeys. Infection with B-Virus produces very mild disease in the monkey. Most have no obvious evidence of infection. Some monkeys may have vesicles (small blisters) which progress to ulcers in the mouth, on the face, lips, or genitals and/or eye. These lesions spontaneously heal after a few days, but the virus resides permanently in the monkey, and may reactivate and cause ulcerative lesions periodically. These relapses are especially likely to occur when the monkey is "stressed" (like cold sores or fever blisters in humans). During these periods, the virus is shed by the monkey to the environment. However, the virus may also be shed by monkeys without visible lesions or symptoms.

Q. How does transmission of the B-Virus from monkeys to humans occur?

- A. Transmission to humans occurs by exposure to contaminated monkey saliva, secretions, or tissues. The most likely routes of transmission are bites and scratches or splashes. There has been a report of person to person transmission.

Q. Who is at risk for infection with B-Virus?

- A. Those at risk include animal caretakers, laboratory personnel, or anyone who is exposed to monkeys or monkey tissues. Persons who are immune-suppressed because of medication or underlying medical conditions may be at higher risk for infection. The risk of acquiring B-Virus infections from macaques is probably very low. Thousands of persons have handled macaques since human infection with B-Virus infection was first reported over 50 years ago, yet only about 22 cases of human infection have been described.

Q. Can there be serious complications from B-Virus infection?

- B. Of the 22 reported cases, 20 infected individuals developed encephalitis and 15 of these patients died as a result of their infection.

Q. How can I protect myself from infection?

- A. Proper work practices markedly reduce the chances of infection. When working with nonhuman primates:
1. Exercise caution at all times, remembering these are wild animals. They can and will bite and are capable of transmitting to humans several diseases as well as B-Virus.
 2. Wear appropriate, protective clothing.
 3. Work together with at least one other person when handling nonhuman primates. Minimize direct handling.

4. Report any observed facial, lip or oral lesions in the nonhuman primates to a veterinarian.
5. For bite or scratch injuries involving a macaque monkey, or scratches with cages or equipment that might be contaminated with their secretions, begin first aid immediately and report as soon as possible to the Occupational Medical Service (OMS), Building 10/6C306. If the injury occurs during non-OMS clinic hours (7:30pm to 7:30am, weekends, or federal holidays) first aid should be initiated at the work site and the on-call OMS physician contacted for further instructions via the NIH Page Operator (496-1211). The first aid provided should follow the wound care instructions posted in your work area.

Q. What are the signs and symptoms of B-Virus infection in humans?

- A. B-Virus related disease is characterized by a variety of signs and symptoms which generally occur within one month of exposure. These include:
1. vesicular (small blister) skin lesions at or near the site of injury.
 2. localized neurological symptoms such as pain, numbness or itching near the wound site.
 3. flu-like aches and pains
 4. fever and chills
 5. headaches lasting more than 24 hours
 6. fatigue
 7. muscular incoordination
 8. shortness of breath.

If such symptoms occur following an injury involving a macaque or equipment contaminated with their secretions or tissues, immediately call the Occupational Medical Service at 496-4411.