

Microbe of the Month

Epstein Barr Virus

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Transmission

The Epstein Barr virus is an enveloped (ds) DNA virus in the Herpesviridae family (HHV-4). The EBV virus is the most common cause of infectious mononucleosis or "mono". It is generally transmitted in saliva. For this reason it is often called the "kissing disease" and is common among college students. EBV persists thru alternate lytic and latent (inactive) phases. EBV binds to oral epithelial cells and a complement receptor on B lymphocyte cells. It then replicates in the lytic cycle. This means war between the lymphocytes with T cells proliferating as they contact infected B cells. The latent cycle forms an episome inside resting B cells. This means that even though you are unlikely to have symptoms, the virus is still present and can reactivate periodically throughout your lifetime.

You are approaching final's week and know you should be studying but you feel exhausted! You have a fever, swollen glands and a sore throat. A couple of weeks pass and you are still dragging. You decide to go into the doctor who finds your lymphocyte count is high and atypical. You are told to rest and to avoid kissing for weeks or even months! Ah well... more time to study.

Treatment/ Prevention:

There is no vaccine for EBV. Most people feel better after 2-4 weeks but the symptoms may last months. Antibiotics are not effective since it is a viral infection. Rest and stay hydrated. Wash your hands and avoid kissing, sharing drinking glasses, utensils, food or drool with an infected person.

Signs/ Symptoms:



The virus is ubiquitous and most people have been infected even if they show no symptoms. About 90% of adults have antibodies that show that they have a current or past EBV infection. Asymptomatic shedding is common and contagious. The disease is mild in children but symptoms tend to be more noticeable in adolescents and adults. The latent cycle does not result in new virions but the virus may reactivate. People with compromised immune systems are more likely to develop symptoms if EBV reactivates.

Symptoms may develop slowly. The incubation period is 4-6 weeks after exposure to the virus.

Symptoms include:

- Extreme fatigue
- Fever
- Swollen lymph nodes
- Sore throat
- Head and body aches
- Rash (sometimes)
- Enlarged liver and/or spleen

Patients with an enlarged spleen should avoid contact sports to prevent splenic rupture.

The presence of EBV in B cells along with the malaria cofactor is associated with Burkitt's lymphoma, a rare form of cancer.

For further questions or concerns, please see your physician.

Reference: www.cdc.gov

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