Epstein Barr Virus

Epstein Barr virus is a member of the herpes family. Epstein Barr virus typically causes mononucleosis but can cause Burkitt's lymphoma and nasopharyngeal carcinoma as well. The virus is able to attach to the CD21 receptor on B cells and can remain latent in these cells. This virus has been implicated in infectious mononucleosis, nasopharyngeal carcinoma, Burkitt's lymphoma and Hodgkin's lymphoma.



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Characteristics

Herpesvirus 4
Harp-virus with (4) Fork
HHV 4 is an additional name for Epstein Barr Virus which stands for human herpesvirus.

Double Stranded DNA
DNA Double-helix
This is a DNA virus, which helps in virus identification. Double stranded refers to the DNA genetic code. All DNA viruses are double stranded except parvovirus.

Linear
Line
Linear refers to the linear double stranded DNA that makes up this virus's genetic code.

Enveloped
Envelope
Herpesvirus is a family of viruses which posses similar characteristics of linear DNA which is enveloped. The family also contains herpes simplex 1, 2, zoster, and CMV, amongst others. Enveloped refers to the encompassing envelope structure which helps identify the herpes family.

Signs and Symptoms

Infectious Mononucleosis
Monkey-nuclear
Epstein Barr mononucleosis is a viral illness characterized by fever, lymphadenopathy and pharyngitis. The disease is commonly referred to as the kissing disease owing to its common demographic of adolescents as well as its ability to be spread in saliva.

Virus Attaches to CD21 in B Cells
CD (21) Black-Jack on Basketball
This virus attaches to CD21 receptors in B cells which is a clue into its tendency to affect lymphocytes. It can remain latent in these cells for long periods of time.

Nasopharyngeal Carcinoma
Nose-pharaoh Car-gnome
Epstein Barr virus has been linked to nasopharyngeal carcinoma. While rare in the United States, it is relatively common in Asia, particularly China. EBV has been shown to be able to infect epithelial cells and is associated with their transformation.

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Burkitt's Lymphoma

Bucket Lime-foam

Neoplasm of B lymphocytes linked to Epstein Barr virus. This neoplasm is the most common childhood tumor in central Africa and more than 90% of these tumors carry the EBV genome.

Hodgkin's Lymphoma

Hog-king with Lime-foam

Epstein Barr virus is associated with the development of Hodgkin's lymphoma, which is a type of lymphoma with distinct pathological features. They are characterized by Reed-Sternberg cells and are typically localized to one lymph node or a chain of nodes. It spreads to contiguous lymphoid tissue, and patients with disseminated disease are more likely to have constitutional "B" symptoms.

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