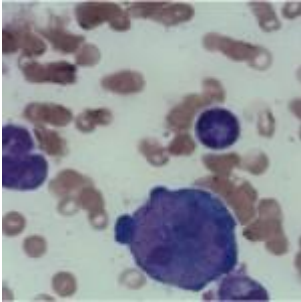


Immune and viral events leading up to acute Infectious Mononucleosis



Epstein-Barr virus (EBV) is a human herpesvirus that causes acute infectious mononucleosis and is associated with cancer and autoimmune disease. It is a chronic viral infection and persists in spite of the host immune response. It employs very elaborate immune evasion strategies to achieve this and is initially transmitted through salivary exchange.

In the most recent edition of PLoS Pathogens, Samantha Dunmire and colleagues investigate the kinetics, dissemination and initial immune response to EBV prior to onset of acute infectious mononucleosis symptoms in college student volunteers. The authors found viral genomes at low levels in blood about 3 weeks before symptoms and high levels of EBV detectable just prior to the onset of symptoms. This also coincided with increased viral detection in the oral cavity and implies that “B cells are the major reservoir of virus in the oral cavity prior to infectious mononucleosis.”

The presence of EBV at high titres in the blood correlated with type I interferon signaling, a decrease in circulating plasmacytoid dendritic cells with the simultaneous polyclonal activation of CD8 T cells. These data suggest that EBV replication is “self-limiting in the oral cavity and that infection is established for several weeks before virally infected cells traffic to peripheral blood and initiate innate

and adaptive immune response.”

[Dunmire, S. et al. 2015. The Incubation Period of Primary Epstein-Barr Virus Infection: Viral Dynamics and Immunologic Events. *PLOS*.](#)