

HERPES VIRUSES:

Epstein-Barr virus a.k.a human herpes virus type-4:

EBV is distributed worldwide with over 90% of adults seropositive

Humans are natural hosts of EBV. The virus is transmitted by exchange of saliva (eg; during kissing).

CLINICAL PICTURES

EBV causes primary infection is infectious mononucleosis glandular fever in young adults the disease has incubation period 30-50 days it is characterized by fever pharyngitis sore throat lethargy fatigue headache malaise lymphadenopathy splenomegaly and elevated liver enzymes IM is usually resolving in (1-2weeks) but fatigue may be persist for months.

Primary EBV infections in children are usually asymptomatic EBV is tumor virus (oncogenic) recurrent infection is reactivated and closely linked with Burkitt lymphoma (this disease is common in African children especially who infected with malaria) nasopharyngeal carcinoma (the disease is common in south Asia especially in males of Chinese origin especially who eating salted fish that treated with nitrosamine) and Hodgkin lymphoma disease (common in Europe and Africa)

EBV is also associated with X-linked lymph proliferative syndrome and hairy leukoplakia a whitish lesion on tongue seen especially in AIDS patients

AL-Mustaqbal University College - Department of Pathological Analysis
Technique

LAB.DX

- a. Hematological approach EBV mononucleosis is diagnosed by demonstration of atypical lymphocytes (abnormal lymphocytes) in blood smear
- b. Immunological approach: EBV-specific serologic tests (paul-bunnell test) can be used to detect heterophile Antibodies that common in EBV infection.
- c. genetic approach EBV DNA can be detected by PCR

CONTROL

Treatment: there is no specific antiviral therapy for EBV. Acyclovir has little activity against EBV.

Prevention: there is no vaccine available to prevent E.BV infection.

CYTOMEGALOVIRUS A.K.A HUMAN HERPESVIRUS TYPE -5

Humans are the natural hosts whereas animal CMV strains do not infect. Human CMV infection occur worldwide distribution it is endemic in all parts of world

the virus is transmitted from person to person by several different ways in early life it is transmitted across placenta within birth canal and commonly in breast milk in young children its most common mode of transmission is via saliva later in life it is transmitted sexually and it can also be transmitted during blood transfusion and organ transplants in

**AL-Mustaqbal University College - Department of Pathological Analysis
Technique**

other words the virus is transmitted by contact with body fluids such as saliva urine semen breast milk cervical secretions and blood.

CLINICAL FEATURES

1-infants infected with congenital infection by this virus during gestation show clinically manifestations of cytomegalic inclusion disease such as microcephaly hepatosplenomegaly strizure deafness jaundice and purpura cytomegalic inclusion disease is one of leading causes of mental retardation infected infants can continue to secrete CMV (shedding) in ride for several years

2-CMV causes a mononucleosis –like syndrome in older children and adults characterized by persistent fever pharyngitis fatigue malaise and lymphadenopathy that is clinically similar to EBV mononucleosis.

3- CMV is opportunistic virus the virus is common cause pneumonia in immunosuppressed patients who have received transplants it can causes retinitis (which can lead to blindness)in patients with AIDS and also causes encephalitis and colitis

LAB . DX :

1. CMV can be isolated by cytopathic effects in cell culture
2. directed diagnosed by immunofluorescence test for detect CMV – specific antibodies
3. CMV DNA can be detected in body fluids by PCR.

AL-Mustaqbal University College - Department of Pathological Analysis
Technique

Control

Treatment ganciclovir is drug of choice for treatment of CMV infections the drug is highly toxic foscarnet is used to treat CMV infections resistant to ganciclovir

Prevention there is no vaccine available to prevent CMV infections barrier contraception and safe sex practice are important preventive measures

Human herpes virus type-6 and type -7

These herpes viruses are less common than others in cause human infections transmission of HHV-6 and HHV-7 occurs by saliva

LAB.DX

Serologic tests are used to detect virus –specific IGM and IgG

DNA of HHV-6 and HHV-7 can be detected by PCR.

CONTROL

A. treatment: there is no specific antiviral therapy for hhv-6 and 7 infections

B. prevention: there is no vaccine against these viruses

HUMAN HERPESVIRUS TYPE-8

Transmission of HHV-8 is primarily sexually and by saliva but it also can be transmitted in transplanted organs .

LAB .DX

1. Biopsy of skin lesions for detected of spindle cells
2. HHV-8 infection is detected by PCR and hybridization with HHV-8- specific probes

CONTROL:

a. treatment

1. there is no specific antiviral therapy for HHV-8 infection
2. surgical excision radiation and systemic drugs such as alpha interferon can be used.

b. prevention

- .1 – there is no vaccine against this virus
2. safe sex practice should reduce the risk of transmission