

11. VIRAL INFECTIONS

Viral infections occur commonly in immunosuppressed persons and often cause death. A large number of viral infections occur in persons with HIV infection and AIDS.

11.1 Herpes simplex virus

Herpes simplex virus (HSV) infection is commonly encountered in clinical practice. It usually presents with vesicles and painful superficial sores around the mouth, nose, lips and genitals. Following an initial attack of herpes simplex infection, recurrences occur frequently. In immunosuppressed persons the infection may be extensive and persistent and may become disseminated. Dissemination may lead to infection of the lungs, the oesophagus, and the brain. Herpes simplex virus may also cause meningoencephalitis, meningitis and myelitis.

Diagnosis

The diagnosis of herpes simplex virus infection is usually made on the typical clinical presentation. It is often difficult to make a diagnosis of disseminated herpes and special laboratory tests, such as viral culture, radioimmunoblot assay and fluorescent and monoclonal antibody tests, may be necessary. Herpes simplex encephalitis leads to the development of multiple lesions in different parts of the brain and typical changes may be seen on CT scan studies of the brain.

Management

Treatment is summarised below:

HERPES SIMPLEX VIRUS MILD INFECTION First line treatment

Antiviral agent	Codes	Dose	Frequency	Route	Duration
Acyclovir	B	E 400mg	TID	PO	7-10 days

**HERPES SIMPLEX VIRUS
RECURRENCES
First line treatment**

Antiviral agent	Codes		Dose	Frequency	Route	Duration
Acyclovir	B	E	800mg	BID	PO	7-10 days

**HERPES SIMPLEX VIRUS
SEVERE AND VISCERAL
INFECTION
First line treatment**

Antiviral agent	Codes		Dose	Frequency	Route	Duration
Acyclovir	B	E	10mg/kg	TID	IV	7-10 days

**HERPES SIMPLEX VIRUS
SEVERE AND VISCERAL
INFECTION
Second line treatment**

Antiviral agent	Codes		Dose	Frequency	Route	Duration
Foscarnet	S	N	60mg/kg	BID	IV	14 days

11.2 Herpes zoster

Herpes virus varicella zoster often causes disseminated infection after initial exposure. In children initial infection results in the development of chicken pox, though most persons that become infected develop no symptoms and signs of infection. The virus lays dormant in the paraspinal ganglia for years. However, with immunosuppression from whatever cause, the virus replicates and produces lesions along the length of a cutaneous nerve in a dermatomal distribution. Dissemination can also occur at this time with involvement of skin, nervous system, lungs and mucous membranes. In immune suppressed persons zoster is often multidermatomal in distribution and is persistent and extensive. It is associated with severe pain and debility. The diagnosis is usually made on clinical grounds.

Management

Treatment is summarised in the tables below:

DERMATOMAL ZOSTER						
First line treatment						
Antiviral agent	Codes		Dose	Frequency	Route	Duration
Acyclovir	B	E	800mg	5 times a day	PO	7-10 days

DISSEMINATED, VISCERAL, OPTHALMIC ZOSTER						
First line treatment						
Antiviral agent	Codes		Dose	Frequency	Route	Duration
Acyclovir	B	E	30-35mg/kg	OD	IV	7-10 days

DERMATOMAL, DISSEMINATED, VISCERAL, OPTHALMIC ZOSTER						
Second line treatment						
Antiviral agent	Codes		Dose	Frequency	Route	Duration
Foscarnet	S	N	60mg/kg	OD	IV	14 days

Post-herpetic neuralgia is a common and serious debilitating problem. It causes severe pain in a dermatomal distribution usually at the site of the lesions. Pain control is often necessary and be achieved with mild analgesics such as paracetamol. If pain control is not achieved with this, then non-steroidal anti-inflammatory drugs may be used or failing this amitriptyline, carbamazepine or phenytoin may be tried.

11.3 Cytomegalovirus infection (CMV)

Cytomegalovirus may affect multiple systems and organs in the body in immunosuppressed individuals. Symptoms include fever and diarrhoea from CMV colitis, dyspnoea from CMV pneumonitis, and blindness caused by CMV retinitis. CMV infection can lead to the appearance of painful ulcers in the mouth resulting in difficulty in eating. Confirming the diagnosis requires costly tests, such as tissue biopsies and DNA hybridization studies and sophisticated equipment.

Management

1. CMV GI disease and neurologic disease:

**CMV GI DISEASE AND
NEUROLOGIC DISEASE**
First line treatment

Antiviral agent	Codes	Dose	Frequency	Route	Duration
Ganciclovir	S N	5mg/kg	BID	IV	2-3 weeks

- Long term treatment with ganciclovir 5mg/kg given IV daily may be necessary.

**CMV GI DISEASE AND
NEUROLOGIC DISEASE**
Second line treatment

Antiviral agent	Codes	Dose	Frequency	Route	Duration
Foscarnet	S N	90mg/kg	BID	IV	3 weeks

- Long term treatment with foscarnet 90mg/kg given IV daily may be necessary.

2. CMV retinitis:

SEE CHAPTER ON OCULAR MANIFESTATIONS

11.4 Epstein Barr Virus-related conditions

Infection with Epstein Barr Virus (EBV), a herpes virus, occurs commonly in persons with HIV infection as well as in persons without HIV infection. Patients with HIV have increased amounts of EBV in their oropharyngeal secretions and have higher EBV antibody titres than HIV-seronegative persons. No specific treatment is available for treating the infection. EBV is thought to cause a number of conditions including,

- Oral hairy leukoplakia
- Non-Hodgkins lymphoma
- Burkitt-type lymphoma
- Nasopharyngeal carcinoma