Back to REPORTABLE DISEASES

Chickenpox (Varicella)

REPORTABLE DISEASES TOOLKIT

Information for Health Care Professionals

Reporting Obligations

Confirmed and suspect cases of varicella shall be reported to the local Health Unit.

REPORTING FORM

Epidemiology

Aetiologic Agent:

Varicella-zoster virus (VZV), the human (alpha) herpesvirus 3, is a member of the Herpesvirus group.

Clinical Presentation:

VZV causes two separate diseases: varicella and herpes zoster (shingles). Varicella is the primary infection and is a reportable disease. Herpes zoster is the secondary infection caused by the reactivation of latent varicella infection and is not a reportable disease.

Varicella is an acute illness characterized by fever and generalized, pruritic, vesicular rash in varying, successive stages of development called "crops". Lesions progress rapidly from maculopapular to vesicular rash, then crusts, resulting in granular scabs.

"Breakthrough varicella" can occur among vaccinated individuals characterized by mild, atypical and in apparent infections. Individuals are afebrile, have uncharacteristic few lesions with papules that do not progress to vesicles.

Fetal infection as a result of maternal varicella infection during the first and early second trimester of pregnancy will occasionally result in fetal death, congenital varicella syndrome (CVS) and other complications.

Modes of transmission:

Person to person by direct contact with Varicella zoster virus through droplet or airborne spread of vesicle fluid or secretions of the respiratory tract or indirectly by freshly contaminated fomites. Scabs are not infectious. Transmission to the fetus during pregnancy can also occur.

Incubation Period:

10 to 21 days, commonly 14 to 16 days; may be shortened in the immunodeficient and prolonged as long as 28 days after passive immunization against varicella.

Period of Communicability:

As long as five days but usually one to two days before onset of rash and until all lesions are crusted, usually about five days after the rash onset. Contagiousness may be prolonged in individuals with altered immunity.

Additional Resources

1. OHA. "Varicella/Zoster (Chickenpox/Shingles) Surveillance Protocol for Ontario Hospitals."
2. Heymann, D.L. Control of Communicable Disease Manual (20th Ed.). Washington, American Public Health Association, 2015.
3. PHAC. "Canadian Immunization Guide, Varicella (Chicken Pox) Vaccine."
4. PHAC. "Canadian Immunization Guide, Herpes Zoster (Shingles) Vaccine."
5. MOHLTC. "Publicly Funded Immunization Schedule for Ontario", December 2016

Risk Factors/Susceptibility

Susceptibility is universal in persons not previously infected or vaccinated. Infection usually confers life long immunity. The virus remains latent in sensory ganglia and disease may recur years later as herpes zoster (shingles) in about 15% of adults and sometimes in children.

Diagnosis & Laboratory Testing

Laboratory confirmation of infection with clinically compatible signs and symptoms in the absence of recent immunization with varicella-containing vaccine.

Caution must be taken when reviewing serological data without reference to the clinical evidence as the response to VZV reactivation (shingles) may be the same as to primary chickenpox.

Optimal recovery of VZV is achieved if specimens (e.g., vesicle/lesion fluid or swab) are obtained 2 to 3 days after rash onset and from fresh vesicles.

TESTING INFORMATION & REQUISITION

Treatment & Case Management

Treatment of cases where indicated is under the direction of the attending health care provider. Varicella infection in pregnancy requires prompt treatment initiated within 24-48 hours of rash onset to prevent maternal and fetal sequelae. Children in whom varicella disease occurred at <12 months of age should receive the routine two-dose varicella-containing vaccine.

Cases of varicella that present with mild illness or are uncomplicated can return to daycare or school as soon as afebrile and well enough to participate in normal activities, regardless of the state of the rash. Transmission is greatest in the prodromal period, therefore exclusion of children from school or daycare after the onset of the rash will not slow down the transmission of the virus.

Health care workers (HCWs) with acute varicella illness must be excluded from work until lesions are dried and crusted.

Varicella vaccine administration to susceptible individuals within 3 to 5 days after exposure has been shown to be effective in preventing or reducing the severity of varicella.

Varicella zoster immune globulin (VarIg) is recommended for high risk susceptible contacts. Optimal benefit of VarIg is achieved if administered within 96 hours after first exposure and duration of protection conferred is approximately three weeks.

Pregnant contacts should consult with their physician promptly to confirm history of varicella vaccination or disease. VarIg should be offered if serologic testing shows no evidence of immunity.

Patient Information

PATIENT FACT SHEET

References

1. Ministry of Health and Long Term Care, Infectious Diseases Protocol, 2014.