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examination of cerebrospinal fluid. Since these antibodies do not cross from the blood into the CSF, a reactive CSF VDRL is diagnostic of neurosyphilis. However, the VDRL is non-reactive in up to 50% of patients with neurosyphilis and other laboratory findings such as raised cell count and protein levels need to be used.

Using the current serologic tests, syphilis cannot be diagnosed on laboratory findings alone and careful examination of the patient's clinical condition is required. More sensitive and specific methods are required to confirm the diagnosis of syphilis and monitor therapy. Future developments such as the polymerase chain reaction (PCR) and the Western Blot assay may be able to provide the confidence to accurately diagnose syphilis and assess response to therapy.

Varicella Zoster Virus

The Virus

Varicella-Zoster Virus (VZV), the causative agent of both chicken-pox (varicella) and shingles (zoster, or herpes zoster), is a member of the family Herpesviridae, which also includes the herpes simplex viruses, cytomegalovirus, and the Epstein-Barr (infectious mononucleosis) virus.

These viruses are enveloped viruses, consisting of an icosahedral nucleocapsid surrounding double-stranded DNA. The envelope consists of two layers, and also has glycoprotein spikes. The DNA codes for approximately 75 proteins.

VZV is similar to most other enveloped viruses, in being particularly susceptible to disinfection and drying.

Herpesviruses have a diameter of approximately 180 to 200nm.

Laboratory Diagnosis

VZV was first cultured in the laboratory in 1952, and it was subsequently proven that Varicella and Zoster were identical immunologically, morphologically, and genetically. Cells such as Human diploid fibroblasts will support the growth of VZV, and the virus produces characteristic cytopathic effects, such as formation of 'giant cells', intranuclear inclusion bodies and micronuclei.

Fortunately we now have quicker and easier methods for diagnosing VZV infection. Stained direct smears (Tzanck smear) from the base of vesicles may show the characteristic multinucleated giant cells. More often, however, viral antigen can be demonstrated in smears by using direct fluorescent antibody (DFA) staining. In addition, anti-VZV antibody can be detected in serum, and a rise in antibody titer between acute and convalescent serum samples can confirm the diagnosis.

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Chickenpox (Varicella)

Chickenpox is a herpes virus.

At risk:	Immunosuppressed patients, e.g. patients with leukaemia or lymphoma etc and non-immune pregnant health care workers.
Mode of transmission:	Predominantly respiratory e.g. droplet. Contact with vesicle fluid.
Infectious period:	From day 10 to 21 post exposure. Day 10 is determined by a calculation of 3 days before contact with the infected person and seven days after contact.
Diagnosis:	Using a Herpes DFA kit swab fluid from the vesicle according to instructions.
Management:	Contact tracing will be performed to ensure staff that have had any contact with the infected person will be investigated regarding immune status. Immune status will be obtained by questioning, for definite past medical history of chickenpox, or obtaining a blood sample for VZV IgG if immune status uncertain. If staff are not immune they will be relieved from patient care duties from day 10 through to day 21. If staff contract chickenpox they must be placed on sick leave until 5 to 7 days after the last vesicle has appeared or until all the vesicles have dried and crusted.
Treatment:	Conservative management in most cases. Acyclovir (Zovirax) or VZV immunoglobulin may be prescribed in specific circumstances.

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