What is cytomegalovirus (CMV)?

CMV is a common virus that is carried by many people. 50 – 80 % of the Canadian population, depending on geographical area, test positive for CMV antibody. CMV infection is usually harmless and rarely causes illness. However, if a person's immune system is weakened, the virus can cause CMV disease.

What is the infectious agent that causes CMV infection?

CMV is a member of the herpes virus family. Other members of the herpes virus family cause chickenpox and cold sores. These viruses can remain latent in tissues and leukocytes for many years following an asymptomatic or mild infection without causing illness. They rarely become active unless the immune system weakens and is no longer able to hold the virus in check.

How do people get infected with CMV?

CMV is spread from person to person. In an infected person, the virus is present in many body fluids, including urine, blood, saliva, semen, cervical secretions, and breast milk. CMV may be also be transmitted through solid organ or hematopoietic stem cell transplantation or through transfusion of CMV seropositive cellular blood components (red cells, platelets) to a CMV seronegative recipient.

Who is at risk for serious CMV disease?

In the majority of patients, CMV does not cause clinical infection. Serious morbidity and mortality from transfusion transmitted CMV infection is largely restricted to susceptible groups including bone-marrow transplant recipients, immunocompromised patients, very low birth weight infants (<1200g) and CMV seronegative women in the early stages of pregnancy where there is a risk of congenital infection of the foetus.

See the table on the next page for a list of patient diagnoses and procedures requiring CMV negative blood components.

How is the risk of CMV transmission by blood transfusion diminished?

Blood collected by Canadian Blood Services is leukocyte reduced which decreases the risk of CMV transmission. Studies in patients with leukemia have shown that leukoreduction of blood products is just as effective as using CMV-seronegative blood products in decreasing the risk of CMV transmission by transfusions. Therefore all blood components in Canada are considered CMV-safe. It is unknown if providing blood that is leukoreduced and CMV-seronegative provides any additional benefit.

<table>
<thead>
<tr>
<th>Indications for Blood Component Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Diagnosis / Procedure</td>
</tr>
<tr>
<td>Intrauterine Transfusion (IUT)</td>
</tr>
</tbody>
</table>

REFERENCES

National Advisory Committee on Blood and Blood Products CMV Statement dated February 14, 2017