

MONONUCLEOSIS, INFECTIOUS

(Glandular fever, Gammaherpesviral mononucleosis, EBV mononucleosis)

REPORTING INFORMATION

No longer reportable. This section presented for your information only.

AGENT

Epstein-Barr Virus (EBV), human (gamma) herpesvirus 4.

CASE DEFINITION

None.

SIGNS AND SYMPTOMS

Infectious mononucleosis is typically manifested by fever, sore throat with exudative pharyngitis, lymphadenopathy with lymphocytosis and atypical lymphocytes in the peripheral blood, and hepatosplenomegaly. Rash can occur, particularly in persons treated with ampicillin. Liver involvement and jaundice can also occur. Central nervous system complications include aseptic meningitis, encephalitis, and Guillain-Barré Syndrome. Rarely, splenic rupture, thrombocytopenia, hemolytic anemia, orchitis, and cardiac involvement occur. Infants and young children are frequently asymptomatic. A chronic mononucleosis-like illness has been described but in several studies has not been shown to be related to EBV.

DIAGNOSIS

EBV can be isolated from oropharyngeal secretions, but this procedure is rarely available in routine diagnostic labs. Viral isolation does not indicate acute infection.

Serologic testing for nonspecific heterophile antibody, including the Paul-Bunnell test and slide agglutination reaction, are most commonly available. These tests are often negative in infants and children under age four, but will identify 90% of cases in older children and adults. Virus-specific serology is valuable for studying patients with heterophile-negative infectious mononucleosis. Testing for cytomegalovirus (CMV) and other viral agents is also indicated. CMV is the most common cause of heterophile-negative infectious mononucleosis in most populations.

Diagnostic virology labs can do specific serologic antibody tests for EBV. The most commonly run test is antibody against the viral capsid antigen (VCA). IgG antibody to VCA (anti-VCA IgG) is found in high titers soon after infection occurs; therefore, testing of paired sera might not be useful. Testing for IgM antibody to VCA (anti-VCA IgM) and antibodies against early antigen (anti-EA) are useful in identifying recent infection.

Antibody against EBV nuclear antigens (EBNA) can be identified only weeks to months after onset of infection; therefore, its presence excludes the possibility of recent infection.

SERUM EBV ANTIBODIES IN EBV INFECTION

Infection	Anti-VCA IgG	Anti-VCA IgM	Anti-EA	Anti-EBNA
None previous	Negative	Negative	Negative	Negative
Acute	Positive	Positive	Pos/Neg	Negative
Recent	Positive	Pos/Neg	Pos/Neg	Negative
Past	Positive	Negative	Negative	Positive

EPIDEMIOLOGY

Source

Humans are the sole reservoirs.

Occurrence

Worldwide, not seasonal in incidence. Infection is generally acquired early in life, especially in lower socioeconomic groups, where intrafamilial transmission is common. Endemic in group settings where young adults are in close contact, such as college dorms and the military.

Mode of Transmission

Intimate contact with secretions of an infected person. Blood transfusion has occasionally been implicated in transmission.

Period of Communicability

Virus can be excreted for many months following infection. Asymptomatic carriage is common. The period of communicability is therefore indeterminate.

Incubation Period

Estimated to be 4 - 6 weeks.

PUBLIC HEALTH MANAGEMENT

Case

Treatment

Supportive. Corticosteroids are generally used for impending airway obstruction, severe thrombocytopenia, or hemolytic anemia, and might be used with CNS involvement, myocarditis, or pericarditis. Corticosteroids for severe tonsillar swelling and lymphadenopathy are not routinely recommended. Contact sports should be avoided to reduce the risk of splenic rupture.

Isolation

Infected persons may return to classes or work when they feel well enough to do so. Good personal hygiene and avoidance of contact with infectious secretions are protective measures to be implemented in the home or community setting. In the hospital setting, no isolation precautions are recommended.

Contacts

Persons who have had exposure to infectious secretions of a case patient should be instructed to seek medical care if symptoms develop.

Prevention and Control

Persons with recent history of EBV infection or an infectious mononucleosis-like illness should not donate blood for at least 6 months following the onset of illness. There is no vaccine available.