



Enterovirus

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Background and Clinical Disease

The family of enteroviruses is a large one that includes polioviruses, coxsackieviruses, and echoviruses. There are over 60 types of non-polio enteroviruses. In the US, enterovirus infections are most likely to occur during the summer and fall. Most infections clear asymptotically but these viruses are a common cause of respiratory illness. In fact, enteroviruses are the 2nd most frequent cause of “the common cold”, leading to 10-15 million or more symptomatic infections a year in the US. Infections will less often result in viral meningitis and very rarely, a person may develop an illness affecting the heart (myocarditis), the brain (encephalitis), or that causes paralysis. Children are most at risk because they likely lack previous exposure. Adults are still at risk as cross immunity will not necessarily protect an individual with exposure to a viral strain to which they have no previous experience.

Transmission

Infected individuals shed the virus through respiratory secretions and stool. Susceptibles can become infected by direct contact with secretions or stool from an infected person or by contact with contaminated surfaces or objects. Parents, teachers, and child care workers are at particular risk of exposure due to frequent infant and toddler diaper changes.

Groups of Special Interest

Newborns are of particular interest because though enterovirus illness in this group is usually mild, rarely they may develop and succumb to an overwhelming infection. The risk of severe illness is higher for the newborns infected during the first two weeks of life. For pregnant women there is no inherent increased risk of infection, but as with any adult they may lack previous exposure and immunity. As with all enterovirus infections, those during pregnancy generally cause asymptomatic or mild illness in the mother and there is no clear evidence that infection causes adverse outcomes like as abortion, stillbirth, or congenital defects. However, mothers infected shortly before delivery, may pass the virus to the newborn increasing the infant’s risk of infection and severe disease.

Infection Prevention

There is no vaccine for non-polio enteroviruses. Transmission is also difficult to interrupt because most infections are asymptomatic. Adherence to generally recommended good hygienic practices like avoiding the ill, general cleanliness and frequent handwashing is paramount, especially for pregnant women around the time of delivery. Cleaning contaminated surfaces and soiled articles first with soapy water, and then disinfecting them with a dilute solution of chlorine-containing bleach (made by mixing approximately ¼ cup of bleach with 1 gallon of water) can be a very effective way to inactivate the virus

More information can be found at the CDC/Division of Viral Diseases Non-Polio Enterovirus Infections webpage:

<http://www.cdc.gov/non-polio-enterovirus/index.html>