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Enterovirus: What Everyone Should Know

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Enterovirus: What Everyone Should Know

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Introduction

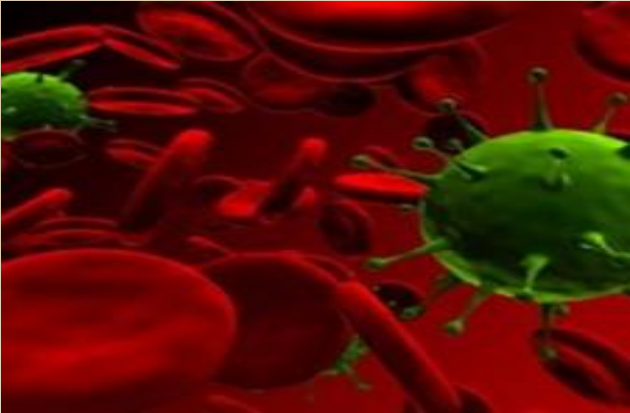
Enterovirus is capturing the attention of everyone; but what is it, who is affected by it, and can it be treated and/or prevented? Like any virus the enterovirus has many different strains. The strain capturing everyone's attention lately is human enterovirus 68 (HEV68). This strain was first detected in California in 1962 (Oberste et al., 2004). Most cases of HEV68 are mild and do not require medical attention, however some can become severe and may cause serious heart or brain infections according to the Center for Disease Control and Prevention (CDC) website (Updated September 8, 2014). HEV68 is a respiratory illness that can mimic the human rhinoviruses with symptoms such as fever, runny nose, sneezing and coughing (CDC, 2014). Most people who become infected with the enterovirus do not require treatment as it is a self-limiting illness, but for others treatment in a hospital setting is necessary (Rotbart & Webster, 2001). Rarely is the illness fatal, though there have been some deaths attributed to the virus (Imamura et al., 2011).

What is Enterovirus?

According to Rotbart and Webster there are about 70 serotypes of enterovirus causing illnesses such as upper respiratory infections, aseptic meningitis, myocarditis, encephalitis, and paralytic poliomyelitis, (2001). HEV68 can present with features like that of the human rhinoviruses. It was first detected in 1962 from four children with bronchiolitis and pneumonia, and since that time the illness has remained relatively undetected (Imamura et al., 2011).

HEV68 causes mild to severe respiratory illness. Mild illness presents as a fever, runny nose, coughing, sneezing, body/muscle aches, rash, or mouth blisters according to the CDC, (2014). Most people who become infected with HEV68 do not require medical care. The illness runs its course and the individual begins feeling better. There have been cases of more serious illness which has necessitated intensive care treatment at a hospital.

What is Enterovirus?



How is it Spread?

HEV68 enters a host through the oropharynx where it then replicates in submucosal tissues. It can optimally grow at body temperature and is resistant to an acidic pH. The virus can take three to ten days to incubate before the onset of symptoms, (Hunt, 2010).

The immune response is initiated, and dependent on the immune state of the host, the virus can either self limit and the host begins to feel better or it can cause severe disease and the host must seek medical care.

Who is at Risk?

HEV68 can attack anyone, but it is more common in infants, children, and teens than adults. The people most at risk are newborns and children with asthma due to an immature or compromised immune system, but there does not appear to be an increase of infection in one gender versus the other. The virus is transmitted by contact with a person or object that has the virus, (CDC, 2014). The CDC also reports that infected pregnant women can pass the virus to their babies if infected with HEV68 just before delivery, (2014).



Prevention



- ❖ Good Hand Hygiene- Washing hands & wrists thoroughly is a great way to prevent the transmission of disease.
- ❖ Avoid Facial Contact- Do not touch eyes, nose, or mouth until after hand-washing.
- ❖ Avoid Close Contact- If someone you know is sick, do not be in close contact with them until their symptoms improve.
- ❖ Disinfect- Clean and disinfect surfaces with bleach or disinfecting sprays that kill 99% of viruses, including enteroviruses.
- ❖ Stay Home- Do not go to work or send children to school if running a fever, vomiting or having diarrhea
- ❖ Cover Your Cough/Sneezes- Use tissue to cough or sneeze into, then discard into wastebasket. If no tissue available cough or sneeze into arm or sleeve.

Treatment

There are currently no vaccinations available to prevent becoming infected with HEV68, nor are there any medications or procedures to treat those who are already infected with HEV68. Treatment is focused on supportive care until the patient recovers

Pleconaril has been studied in the treatment of life-threatening enterovirus infections, (Rotbart & Webster, 2001) but has not been approved by the Food & Drug Administration. To date there are no approved medication in the treatment of enterovirus, (De Palma et al., 2007)

Conclusion

Enterovirus has been all over the news recently, though it is not a new virus. HEV68 was first detected in 1962 in four children who were hospitalized with bronchiolitis and pneumonia, (Imamura et al., 2011)

The virus is mostly responsible for causing mild illness in most people such as fever, runny nose, sneezing, and coughing (CDC, 2014), while others may present with more serious symptoms which require hospital care. HEV68 typically runs from late summer through late fall.

Since there is no treatment available for HEV68, nor are there any vaccinations to prevent getting infected with HEV68, the best course of action is using good preventative measures. The simplest actions can be the most effective, such as a healthy lifestyle, using good hand washing techniques, and staying home if sick.

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