International Journal of Pharmaceuticals and Health care Research (IJPHR)

IJPHR |Vol.13 | Issue 1 | Jan - Mar -2025

www.ijphr.com

ISSN: 2306-6091

DOI : https://doi.org/10.61096/ijphr.v13.iss1.2025113-116

Research/Review

A Study On Human Metapneumovius

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Published on: 13 Mar 2025

Published by:
DrSriram Publications

Abstract

Human metapneumovirus (HMPV) is a relative newly described virus. It was first isolated in 2001 and currently human viral infections. Retrospective serologic studies demonstrated the presence of HMPV antibodies in humans more than 50 years earlier. Although the virus was primarily known as causative agent of respiratory tract infections in children.HMPV is an important cause of respiratory infections in adults as well. Almost all children are infected by Hmpv below the age of five. The repeated infections through out life indicate transient immunity. HMPV infections usually are mild and self – limiting, but in the trail elderly and the immunocompromised patients, the virus is relatively difficult, diagnosis is mostly based on a nucleic acid amplification test, such as reverse transcriptase polymerase chain reaction. To date, no vaccine is available and treatment is supportive. However, ongoing research shows encouraging results. The aim of this paper is to review the current literature concerning HMPV Infections in adults, and discuss recent development in treatment and vaccination.

Keywords: vaccine development, antiviral therapy, supportive treatment, epidemiology.

INTRODUCTION

The most common illness experienced by people of all ages world wide is a acute respiratory tract infection (RTI) it is a leading cause of mortality and morbidly worldwide. Viruses are responsible for a large proportion of RTI'S.A significant portion of the infections with viral etiology can be attributed to the human metapneumovirus (HMPV) also in adults. HMPV is a virus that usually symptoms similar to a cold. You might cough (or) wheeze, have a runny nose (or) a sore throat. Most cases are mild, but young children, adults over 65 and people with weakened immune systems are at a higher risk for serious illness. HMPV is a virus that causes

upper respiratory infections. But it can sometimes cause lower respiratory infections like pneumonia, asthma flareups (or) make chronic obstructive pulmonary disease (COPD) worse. HMPV infections are more common in the winter and early spring. You're more like to get severely sick the first time you get HMPV, which is why young kids have a greater risk for serious illness. You get some protection (immunity) from your first infection and then are more likely to have mild, cold- like symptoms if you get another HMPV infection. Adults over 65 and people with breathing problems (or) a weakened immune system may also get severe symptoms. How common is human metapneumovirus:researchers estimate that about 10:/:to 12:/:of respiratory illness in children are caused by HMPV. Most cases are mild, but about 5 :/:to 16 :/:of children will develop a lower respiratory tract infection like pneumonia.

Symptoms of HMPV

1.cough
2.fever
3.Runny(or) stuffy nose
4.sore throat
5.wheezing
6.shortness of breath (dyspnea)
7.Rash

Cause of HMPV infection

- A Virus- a small germ that uses your cells to make more copies of itself- causes HMPV. It's part of the same group of Viruses that cause RSV, measles and mumps.
- Transmission:-HMPV spreads through direct contact with someone who has it from touching things contaminated with the virus for instance.

1. Coughing and sneezing
2. Shaking hands, hugging (or) kissing
3. Touching surfaces(or) objects like phones, door handles, keyboards (or) toys.

❖ **Risk factors for HMPV:-Anyone can get HMPV, but you're at a higher risk for severe illness if you:**

1.Are younger than 5 (especially premature infants) (or) older than 65.
2.Have a weakened immune system (from conditions like HIV, cancer your immune system).
3.have a asthma (or) COPD.

❖ **Complications:-**

Sometimes HMPV causes complications. These might be serious and require you to be hospitalized.
1.Bronchiolitis
2.Bronchitis
3. Pneumonia
4.Ear infection(otitil media)
5.Asthma (or) COPD flare – ups.

DIAGNOSIS AND TCH

Health care provides usually diagnosis HMPV based on your symptoms and healthy history. They might use a soft tipped stick to get a sample from your nose (or) throat. A lab tests the sample for Viruses and other infections. Keep in mind that you probably won't be tested for HMPV unless you have serious symptoms. Sometimes, your may also do a bronchoscopy (or) chest x- rays to look for changes in the airways of your lungs.

MANAGEMENT AND TREATMENT

Thre can't any antiviral medications that treat HMPV. Most people can manage their symptoms at home until they feel better. If your(or) child are severely ill, you might need to be admitted to the hospital. There, health care provides can monitor your conditions and help prevent you from getting sicker. They might treat you with:
1.oxygen therapy:- if you're having a hard time breathing a provider may give you extra oxygen through a tube in your nose (or) madk on your face.
2.IV- fluids: Fluids delivered directly to your vein (Iv) can keep you hydrated.

CORTICOSTEROIDS

Steroids can reduce inflammation and might easy some of your symptoms. Antibiotics only treat bacteria. Since HMPV who get pneumonia from HMPV also get a bacterial infection at the same time. If your provider prescribes antibiotics, it would be to treat any secondary infections.

PREVENTION

You can reduce your risk of getting HMPV and other infections diseases.

1.washing your hands often with soap and water. If you aren't able to use soap and water, use an alcohol- based hand sanitizer.
2.cover your nose and mouth- with your elbow, not your base hand- when you sneeze (or) cough .
3.Avoid being around other people when you (oral they are sick with a cold(or) other contagious diseases.
4.consider wearing a mask if your sick and can't avoid being around others.
5.avoid touching your face, eyes, nose, & mouth.
6.don't share food (or) eating utensils (forks, spoons, cups) with others.

PROGNOSIS

Mild cases of HMPV usually last a few days to a week. If you're very sick, it ll probably take longer to feel better. You might also have lingering symptoms, like a cough, that take longer to go away.
You can manage mild, cold- like symptoms of HMPV at home by:
1.Drinking lots of fluids to prevent dehydration.
2.Taking over – the – counter (OTC) medications like pain relievers. Don't give medications to kids without asking their pediatrician first – some medications that are ok for adults aren't safe for kids.
3.you (or) your child has symptoms of a respiratory infections and an underlying conditions that puts you (or) them at an elevated risk for severe illness.
4.your symptoms (or) your child's symptoms don't start to improve with in a few days (Or) if you (or) your child has a fever lasting longer than 3 days.

WHEN SHOULD I GO TO THE ER

Go to the ER (or) seek immediate medical attention if your (or) your child has symptoms of severe illness, including:

1.High fever (over 103 degrees forgenheit/ 40 degrees Celsius)
2. Difficulty breathing
3.Bluish skin, lips(or) nails (cyanosis)
4.worsening of other health conditions.

CONCLUSION

HMPV is an important pathogen causing viral RTI. People at risk are the elderly, the immunocompromised patients and patients with cardiac (or) pulmonary disease. While HMPV infections are mild and self – limiting in the majority of adults, clinical course can be complicated in these risk groups and associated morbidity and mortality are considerable.

KEY WORDS

- HMPV is an important pathogen causing viral RTI in adults.
- The elderly, immunocompromised patients and patients with cardiac (or) pulmonary disease are at risk for severe infection.
- Distinuishing HMPV clinically from other respiratory viruses is difficult diagnosis relies mainly on RT-PCR.
- Although a lot of research has been performed last years, treatment of HMPV infection is mainly supportive and no vaccine is available up to till now
- In case of severe infections, treatment with riboflavin and IVIG might be considered.

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