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Human metapneumovirus (HMPV) is a respiratory virus belonging to the Paramyxoviridae family, first identified in 2001. HMPV is closely related to respiratory syncytial virus (RSV) and both are part of the same virus family (Pneumoviridae). HMPV can cause upper and lower respiratory tract infections. Based on historical data, cases are expected throughout the year without a defined seasonal pattern.

Epidemiology

Incidence: Affects all ages. **Transmission:** Primarily transmitted via respiratory droplets (coughs or sneezes) and direct or indirect contact with contaminated surfaces. The incubation period is 3 to 6 days after exposure. Close physical contact, such as in schools, or healthcare settings, make it highly contagious in crowded settings. **High-Risk Groups:** Young children, particularly infants under six months and those born prematurely, immunosuppressed individuals, older adults, people with chronic conditions, such as asthma, chronic obstructive pulmonary disease (COPD), or any other lung disease. **Geographical Distribution:** Ubiquitous in South Africa

Management

IPC Measures: Standard precautions, droplet precautions, and contact precautions should be followed by healthcare workers when caring for patients with hMPV to prevent transmission, especially in settings where respiratory droplets and direct contact with contaminated surfaces may occur. **Mild illness:** Self-resolving and can be managed at home with rest, hydration, medication for pain and fever. **Severe illness:** Supportive care, including oxygen supplementation, fluids, and bronchodilators. **Antiviral Therapy:** Specific antiviral treatments are not available.

Clinical Presentation

Mild illness: (Most cases) upper respiratory tract symptoms similar to a cold, such as cough, runny nose, nasal congestion, and possibly fever or sore throat. Symptoms should improve after 3-5 days. **Severe illness:** Lower respiratory tract symptoms causing bronchitis, bronchiolitis or pneumonia, and acute respiratory distress syndrome.

Diagnosis

HMPV cannot be clinically distinguished from other respiratory viral infections. Diagnosis can only be confirmed through a laboratory test. Testing is typically reserved for severe cases requiring specific management. **Laboratory Tests:** Diagnosis is confirmed by taking a swab from the nose or throat and sending the sample to a lab for testing, where PCR is utilized for accurate diagnosis.

Prevention

Hand hygiene and precautions: Wash hands frequently with soap and water, avoid touching the face, and steer clear of sick individuals. Cover coughs and sneezes, don't share utensils, and refrain from close contact like hugging and kissing. Stay home, when sick, to recover.

Vaccination: There is no vaccine for hMPV currently available. Vaccines for hMPV are in the late stages of development.

Differential Diagnosis:

Other respiratory illnesses such as RSV, influenza, adenovirus, parainfluenza virus, SARS-CoV-2, bacterial pneumonia, rhinovirus, mycoplasma pneumonia, and other viral infections (e.g., enterovirus).

For more information visit the NICD website: <https://www.nicd.ac.za/diseases-a-z-index/human-metapneumovirus/>