



RESPIRATORY VIRUSES IN IMMUNOCOMPROMISED PATIENTS

KEY POINTS

Although common colds and upper respiratory illnesses may seem trivial, the viruses involved can cause life-threatening infection in immunocompromised patients

Staff with colds must not care for immunosuppressed patients

Simple steps can be taken to reduce the risk of transmission of common-cold viruses to and between patients

All staff are offered immunisation against influenza in the autumn

INTRODUCTION

Young children and immunosuppressed patients are susceptible to serious disease due to respiratory viruses such as influenza, parainfluenza and respiratory syncytial viruses (RSV).

Parainfluenza 3 virus causes annual outbreaks in the summer and influenza and RSV in the winter. In adults, they cause mild self-limiting upper respiratory tract illness. Infected infants may develop croup, bronchiolitis or pneumonia. Immunosuppressed patients may develop pneumonitis with any of these viruses. Bone marrow or peripheral stem cell recipients are at particularly high risk. Outbreaks have been reported with high mortality. Those most at risk are within four months of the transplant. The incubation period is 2-5 days.

PERIOD OF INFECTIVITY

Patients are infectious while they are symptomatic. Immunosuppressed patients may excrete virus for weeks or months.

TRANSMISSION

Parainfluenza and RSV are transferred by direct or indirect contact. Aerosol droplet transmission is also possible, and is normal for influenza virus. The viruses are acquired on the hands by contact with respiratory secretions of the infected patient or their fomites. The organisms survive for many hours on environmental surfaces. Infection is most likely to be acquired when contamination from hands is inoculated into the mucosal surfaces of the nose and the eyes.

Issued by Infection Control Services Ltd. For more policies and information visit: www.infectioncontrolservices.co.uk	Publication Date: April 2007	Page 1 of 3
	Review Date: April 2009	
<p>Legal disclaimer. Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practices. However, the author, is not responsible for errors or omissions in these Guidelines and make no warranty, express or implied, with respect to the contents of the publication. We do not accept any liability whatsoever for any loss or damage arising from applying, following or using any interpretation of information contained in this document.</p>		

DIAGNOSIS

Diagnosis is best made by identifying the virus by immunofluorescence of respiratory tract cells using specific antibodies. It is vital to send good specimens from the respiratory tract as soon as possible after symptoms start. This allows infection control procedures to be put in place. Culture may be done but is rather slow.

The best samples are:

- Broncho-alveolar lavage
- Nasopharyngeal aspirate
- Sputum
- Throat swab into viral transport medium

MANAGEMENT



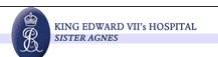






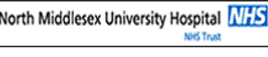
STAFF

- Staff with upper respiratory infections must not attend immunosuppressed patients
- Symptomatic staff must submit specimens (eg sputum, T/S into VTM or pernasal aspirate) for viral investigation

PATIENTS

Management of suspected cases:

- Source Isolate in a single room. Maintain diligent hand hygiene
- Stethoscopes and other equipment used for one patient. Disinfect with alcohol wipes regularly
- Discharge home if possible, *or*
- Continue source isolation until clinical recovery (even if virus examination is negative) and two consecutive viral specimens taken one week apart are negative by immunofluorescence and culture
- On patient discharge clean all surfaces and wipe with fresh chlorine releasing agent at 10,000ppm (it is not necessary to wash the walls)
- On readmission, isolate until viral specimens are known to be negative

Issued by Infection Control Services Ltd. For more policies and information visit: www.infectioncontrolservices.co.uk	Publication Date: April 2007 Review Date: April 2009	Page 2 of 3		
 	 	  	  	 
<p>Legal disclaimer. Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practices. However, the author, is not responsible for errors or omissions in these Guidelines and make no warranty, express or implied, with respect to the contents of the publication. We do not accept any liability whatsoever for any loss or damage arising from applying, following or using any interpretation of information contained in this document.</p>				



OUTPATIENTS

- Keep symptomatic patients separate from others in a single room while they are waiting to be seen
- Staff to maintain diligent hand hygiene

CONTACTS

- Contacts must be Source Isolated for 5 days
- If symptoms develop, continue Source Isolation and send viral specimens

TREATMENT

Ribavirin is the only antiviral agent recommended for RSV infection. Combination of ribavirin and high titre immunoglobulin may be tried in immunosuppressed patients and may reduce mortality. Immunoglobulin may afford some protection in children against severe lower respiratory tract infection. There are no data to suggest that ribavirin is active against parainfluenza virus infection.

Influenza A infection may be treated or prevented by amantidine. Influenza A and B infection may be treated by zanamivir. Use of these drugs will be on the recommendation of the Infection Control Team with the Consultant in Communicable Diseases Control. There is a District policy for pandemic influenza.

INFLUENZA IMMUNISATION POLICY

The Occupational Health staff at most hospitals now offer immunisation to all staff in the autumn. The aim is to reduce sickness levels in staff during the winter ‘flu season. It is particularly important for those working in critical areas (eg intensive care, A/E, obstetrics, infectious diseases). Epidemics of influenza cannot be predicted. The vaccine contains representatives of strains which have been seen in the last few years. A major antigenic shift in the type of virus would render the vaccine ineffective. Viruses for vaccines are raised in hen’s eggs, so the vaccine is contraindicated in those with egg allergy. The vaccine is also offered to the old and infirm.

Issued by Infection Control Services Ltd. For more policies and information visit: www.infectioncontrolservices.co.uk		Publication Date: April 2007 Review Date: April 2009	Page 3 of 3
<p>Legal disclaimer. Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practices. However, the author, is not responsible for errors or omissions in these Guidelines and make no warranty, express or implied, with respect to the contents of the publication. We do not accept any liability whatsoever for any loss or damage arising from applying, following or using any interpretation of information contained in this document.</p>			