

Uses

Anti-viral drug also known as Tribavirin: inhaled treatment for children or intensive therapy in adults. Administered for several hours a day.

Harmful Effects

Possible respiratory tract sensitiser with risk of asthma;
Pregnancy effects: unknown in humans; foetal toxicity effects have been shown in a variety of animals. It must be assumed to pose a significant risk during pregnancy.
There is no exposure limit. Comparisons with therapeutic dose are not valid

Exposure

The selection of equipment used for administering Ribavirin is important. A simple mask with holes for exhalation leads to escape of nebulised droplets into the room. A one-way valve makes it possible to capture exhaled air and exhaust it remotely with much less escape into the room. Rinsing nebulizers in tap water has resulted in patients acquiring legionnaires disease.

Precautions

The head of department should document a working procedure, for the safety of staff and patients, based on the following, and monitor its implementation. The advice below is similar to that for Pentamidine but: there is a greater hazard (see above); different administration make it more difficult to control exposure.

- Arrange for make up of drug, (powder to liquid) by pharmacy, using exhaust booth to avoid inhaling powder.
- If this is not possible, wear protective equipment (as described below) before commencing reconstitution of powder. Good technique is essential to avoid pressurising phial and generating aerosol.
- Instruct staff on the potential harmful effects and on the safe working procedure.
- Use single-purpose room if possible. Otherwise: ensure thorough cleaning between patients; mechanical ventilation (15 air changes an hour), patient call button, and viewing window to permit observation of patient from outside.
- Use CPAP mask or equivalent, connected to a one-way device as used for pentamidine (guidance note 0306); this to be connected to the ribavirin nebuliser device and to an exhalation tube, which may be discharged out of the window or into a ducted extraction system.
- Instruct patient on use of nebulizer: switch on after exit of nurse; switch off before interrupting treatment for any reason (eg coughing fit); switch off after completion before calling nurse.
- Staff should leave room during treatment unless patient is in need of active assistance..
- Staff should wear protective equipment if entering the room during treatment or immediately afterwards: disposable respirator suitable for mists (type FFP3. A face fit test is required for all individuals); disposable gloves; eye protection if splashing with solution is a possibility; training in correct use of respirator by competent person, repeated annually.
- Staff known to be pregnant: diligent use of a respirator; restrict involvement eg to covering meal breaks. See Occupational Health note below.
- After treatment: leave ventilation on high setting for 30 minutes before unprotected entry.
- If nebulizer is re-used, ensure it is decontaminated by a method which will prevent the risk of legionella.
- Complete incident report if a member of staff reports adverse effects and refer to Occupational Health Service.

Occupational Health

Consult Occupational Health Service if individuals report problems and on possible need for Heaf Testing / BCG for staff against TB risk from immuno-compromised patient.

Routine health surveillance for all staff involved in administering ribavirin (as for staff exposed to sensitisers).

First Aid

Skin exposed to splashes should be washed thoroughly; seek medical attention if eyes are splashed.