

Uses

Anti-infective drug: inhaled treatment or prophylaxis for lung infections in immuno-compromised patients. Normally supplied as powder to be reconstituted with water for use in nebuliser.

The guidance below can be adapted with few changes to some other nebulized drugs. See also Note 0805 for ribavirin.

Harmful Effects

Possible respiratory tract sensitiser with risk of asthma; reports of metallic taste and nausea from nursing staff.

Pregnancy effects: unknown in humans - increase in miscarriage and bone defects in rabbits..

There is no exposure limit. Comparisons with therapeutic dose are not valid.

Exposure

Escape of nebulised drug is difficult to avoid (leaks, imperfect exhaust of exhalation, nebuliser left on during breaks in treatment, etc). Some circumstances (eg patients' homes) are difficult to control. Cooperation from patients is sometimes problematic even in the hospital environment. Active TB is likely in some patients for whom treatment is prescribed. This risk is exacerbated by the coughing spasms often provoked by the treatment. Rinsing nebulizers in tap water has resulted in patients acquiring legionnaires disease.

Precautions

The head of department should document a working procedure, for staff and patient safety, based on the following, and monitor its implementation.

- 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 (or permit other treatment purposes which do not conflict with pentamidine administration) with high ventilation rate (15 air changes an hour), patient call button, and viewing window to permit observation of patient from outside.
- Ensure nebuliser includes filter in exhaust line from patient (or ensure exhaled air is extracted)
- Instruct patient on use of nebuliser: 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 except if responding to call signal.
- Staff should wear protective equipment if entering the room during treatment or immediately after: disposable respirator suitable for mists (type FFP3. 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.
- If nebulizer is re-used, ensure it is decontaminated by a method which will prevent the risk of legionella
- Pregnant staff may be at increased risk; diligent use of a respirator will provide protection; also restrict involvement, eg to covering meal breaks. See Occupational Health note below.
- After treatment, vacate room (with ventilation running) for 30 minutes before permitting occupation for other purposes by unprotected staff or patients.
- Complete incident report if a member of staff reports adverse effects and refer to Occupational Health Service.

Occupational Health

Consult Occupational Health Service in advance on: pregnant or asthmatic staff, routine health surveillance (normally required for staff exposed to sensitisers) and on possible need for Heaf Testing / BCG for staff against TB risk from immuno-compromised patients.

First Aid

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