Outstanding Care, Compassionate People, Healthier Communities

NHS Sherwood Forest Hospitals NHS Foundation Trust

INFORMATION FOR PATIENTS

How to administer nebulised Gentamicin® in adults with non-cystic fibrosis bronchiectasis

General information about nebuliser therapy

This leaflet provides information about the use of nebulised Gentamicin. It is not intended to replace talking with medical or nursing staff.

Inhalation (breathing medication into the lungs) via a nebuliser and compressor system is an excellent delivery technique. It allows treatment to be delivered directly where it is needed, into the lungs and airways.

The fine mist created by a nebuliser allows particles of medication to be breathed in efficiently to reach the small airways of the lungs.

The use of inhaled nebulised Gentamicin for the treatment of infection in patients with non-cystic fibrosis bronchiectasis is an unlicenced treatment, but common practice and recommended in British Thoracic Society (BTS) guidance.

Why do I need nebulised antibiotic treatment?

It is used in the treatment of chronic infection of the airways.

Gentamicin injection may be given by nebulisation and, although it is not specifically licensed for the use in patients with bronchiectasis, there is much experience in its use.

Are there any procedures I need to do prior to treatment?

Your chest should be cleared of secretions prior to taking the nebulised antibiotic. Your physiotherapist can show you how to do this if you are not sure.

How to prepare the Gentamicin for nebulisation

Wash your hands first.

You will need to prepare the following on a clean surface:

- A vial of Gentamicin as prescribed.
- A vial of sodium chloride as prescribed.
- 5ml syringe.
- Blunt fill needle.
- Ampoule breaker and yellow sharps bin.
- Pari LC Plus nebuliser and filter/ valve set.

Nebulised Gentamicin should be administered through a closed circuit with a filter.

It should not be given in a normal nebuliser circuit used for other medications.

Check the vial of Gentamicin is the prescribed dose and the use by date is still in date.

Use an ampoule breaker to snap the top off the Gentamicin ampoule (you will be shown this when you have your first dose of nebulised Gentamicin).

Draw up the Gentamicin liquid using the needles and syringes provided and pour into the nebuliser chamber.

If an ampoule breaker is not required draw up the Gentamicin liquid using the needles and syringes provided and pour into the nebuliser chamber.

Add then 2ml of 0.9% sodium chloride to the nebuliser chamber.

Assemble the rest of the nebuliser equipment and filter system as demonstrated when you had your first dose of nebulised Gentamicin and start nebulising.

Dispose of your sharps in the yellow sharps bin provided.

How to administer inhaled Gentamicin:

- To prevent exposure to others, the door of the room should remain closed and nobody else should enter during nebulisation and for 30 minutes afterwards.
- The window should be open for the same period.
- If your compressor works from mains electricity, connect the supply lead to the machine socket and plug into the mains supply.
- Connect the nebuliser pot and expiratory filter to the compressor with the tubing supplied.
- Switch on and breathe slowly in and out with the mouthpiece in your mouth.
- Treatment is finished when the nebuliser begins to spit.
- When finished, safely dispose of the used Gentamicin vial, the sodium chloride vial, syringe and needle into the yellow sharps bin provided by your respiratory nurse.
- Wash your hands.

To gain the most benefit from your medication

The following steps should be followed:

- Sit comfortable in an upright position.
- Mouthpieces should be used to help efficient drug delivery and prevent any mist irritating the eyes.
- Seal your lips around the mouthpiece and breathe through your mouth.
- Breathe at a rate which is comfortable.
- Do not talk while using your nebuliser.
- If a short break is required at intervals, you can switch off the compressor and start again when ready.
- When nebulising antibiotics, a filter/ valve set should be used to prevent possible environmental contamination.
- After inhaling the nebulised Gentamicin ensure that you rinse your mouth with fresh water to minimise local exposure.

Will this affect my other medication?
The nebulised antibiotic is poorly absorbed through the lung into the bloodstream and therefore should not affect any other medication taken.

If you normally take Ventolin (Salbutamol) then you should continue to take this before the antibiotic as shown on your initial assessment.

Are there any side effects?
You will have been given a test dose of nebulised Gentamicin by the respiratory nurse to ensure you do not experience chest tightness or difficulty with breathing while inhaling the antibiotic.

Before you start
Take your reliever inhaler or nebuliser as prescribed at least **20 minutes before** inhaling the Gentamicin.

Having started the course, if you experience any symptoms of increase wheeze, chest tightness or difficulty with breathing you should immediately:

- **STOP** the nebuliser.
- Take your RELIEVER inhaler or nebuliser as prescribed.
- If this is severe and does not improve with your reliever inhaler/ nebuliser, go to the Emergency Department at your local hospital or phone for an ambulance.
- **Inform your respiratory nurse at the earliest opportunity.**
- Should you experience any other side effects, you need to stop using the nebulised Gentamicin, **seek medical advice, and inform your respiratory nurse at the earliest opportunity.**

How long will I have to take the antibiotic?
If the antibiotic does not cause side effects, your doctor may want to continue, and you may need long-term treatment.

Usually, your consultant will want to review things after a few months before deciding on the length of treatment. Some patients stay on the antibiotic indefinitely. Further sputum testing may be done to see if the infection is still present. It may not be completely eradicated.

What equipment will I need?
You will need a compressor, nebuliser for the antibiotic and filter kit. This equipment will be provided at your initial assessment.

You will also have been given syringes, needles, ampoule breaker and a yellow sharps bin for the needles and glass ampoules after they have been used.

Cleaning the nebuliser
Pseudomonas germs (bacteria) love a warm moist environment. If you do not clean the nebuliser equipment properly, germs will thrive.

Please clean the equipment as follows:
- It is important to keep your nebuliser clean and dry. A small amount of drug always remains in the medication container after treatment. This can block the nebuliser jets if it is not cleaned.
- After every use, disconnect the nebuliser from the tubing and turn on the compressor for a short period to clear any moisture from the tubing.

- Remove the tubing and the mouthpiece from the nebuliser. Unscrew all the parts of the nebuliser.
- Wash the nebuliser pot and mouthpiece in hot soapy water. Rinse under hot running water to clear the fine jets. Allow to dry thoroughly.
- It is essential the nebuliser parts are completely dried before they are reassembled.
- Always follow the instruction sheet included in the nebuliser equipment pack on how to clean the Pari LC plus nebuliser and filter/valve set.
- The Pari LC plus nebuliser and filter/valve set will last for 12 months and will need to be changed after this time. This will be reviewed by your respiratory nurse.

Care of the compressor:

- Always keep your compressor on a firm surface, and not on the carpet or floor, to avoid dust being drawn in.
- Regularly wipe clean with a damp cloth.
- The compressor should be serviced every 12 months. Your respiratory nurse will arrange this for you, alternatively you could take the compressor to clinic 2.

Ordering more medication and equipment

Once at home you will need to get a repeat prescription from King's Mill Hospital for the Gentamicin and sodium chloride.

You will have to order a supply of filters, syringes and needles using the contact details provided for the respiratory nurses.

Filter pads

These must be changed every time after using the nebuliser and see your respiratory nurse for further supply.

Who will monitor my treatment/ progress?

The consultant who prescribed this treatment will monitor your progress. Your GP will monitor your general health and report any adverse reactions that may occur.

Contact details

Respiratory Specialist Nurses
Respiratory Department
Level 4
King's Mill Hospital
Sutton-in-Ashfield
Notts
NG17 4JL

Telephone: 01623 622515, extension 6831, 3541 or 6324, Monday to Friday between 9am–5pm.

Useful information

Asthma + Lung UK
Telephone helpline: 0300 222 5800
Email: helpline@asthmaandlung.org.uk
WhatsApp helpline (asthma): 07999 377 775
Website:
https://www.asthmaandlung.org.uk/

Further sources of information

NHS Choices: www.nhs.uk/conditions
Our website: www.sfh-tr.nhs.uk

Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

King's Mill Hospital: 01623 672222
Newark Hospital: 01636 685692
Email: sfh-tr.PET@nhs.net

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email sfh-tr.PET@nhs.net.

This document is intended for information purposes only and should not replace advice that your relevant health professional would give you.

External websites may be referred to in specific cases. Any external websites are provided for your information and convenience. We cannot accept responsibility for the information found on them.

If you require a full list of references for this leaflet, please email sfh-tr.patientinformation@nhs.net or telephone 01623 622515, extension 6927.

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