

CF Guidelines - Nebulised Drug Challenge

Introducing Nebulised Drugs:

It is important that the effect of any new inhaled drug is monitored, by performing respiratory function tests before and after nebulisation. Occasionally there may be deterioration in lung function due to irritation of the airways causing secondary bronchospasm. This is more likely to occur with antibiotics, e.g. Colistin. If the patient feels that the nebulised treatment makes him/her worse it should be stopped immediately. Some patients may benefit from using a bronchodilator prior to taking a nebulised drug.

Preparation:

- The doctor should prescribe the nebulised drug on a standard prescription chart dated for the day of the challenge.
- A 'prn' salbutamol nebuliser should also be prescribed, by the doctor, for use in case of bronchoconstriction during or after the challenge. If the patient is unable to use salbutamol (e.g allergy) discuss an alternative to be prescribed with the Dr.
- If the patient is regularly on a bronchodilator, either nebulised or inhaled, this should be prescribed by the doctors to be taken 15 minutes prior to the drug challenge.
- Ensure that the correct powered nebuliser compressor is signed out the patient, e.g. Turboneb, E-Flow.
- Obtain the correct nebuliser chamber for the drug to be used in the challenge, and a chamber for the bronchodilator in case of bronchoconstriction during the challenge. Nebulised antibiotics, steroids and antifungal drugs require a chamber with a filter set (closed circuit). All other drugs inc. Colomycin do not require a closed circuit system. For the E-Flow a PARI filter set should be used.

Administration Procedures for Nebulised Drugs:

- Airways clearance techniques should be completed prior to the challenge.
- Carry out spirometry to obtain the patients FEV₁ and FVC. If the patients FEV₁/FVC are significantly lower than the patient's normal readings (see patients notes), or if the FEV₁ is lower than 1 litre, discuss with the Dr before proceeding with the challenge.
- Administer 2.5mg of salbutamol.
- After 15 minutes administer the drug for the challenge. Teaching the patient how to draw up the solution, put the nebuliser chamber together and where to put the solution. Turn on the compressor.
- Instruct the patient to breathe in and out through the mouth with tidal volumes.
- Instruct the patient to inform you immediately if they experience any chest tightness, wheeze or difficulty in breathing when they are taking the nebuliser. The nurse/physiotherapist must stay with the patient throughout this period.
- Repeat the spirometry immediately after the nebuliser has finished and again 30 minutes after completion.
- Administer the salbutamol nebuliser if bronchoconstriction occurs during, immediately after the nebuliser or if there is a 10% or greater fall in the post challenge spirometry. Repeat the spirometry after the salbutamol nebuliser has completed to ensure a full recovery in lung function. Inform the Dr.
- Instruct the patient on how to clean and care for their nebuliser chamber and compressor as per the manufacturers instructions.
- If relevant give the patient written information sheet for administering the

nebulised drug at home.

- If relevant, supply the patient with the necessary syringes and sharps bins needed for continuing with the nebulised drug at home.

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