

DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE (JAPC)

Use of nebulised Colistimethate injection (Colomycin®) in *Pseudomonas aeruginosa* lung Infections in Adults with Bronchiectasis (non-Cystic Fibrosis) **GREEN – after consultant/specialist initiation**

Introduction

Pseudomonas aeruginosa can cause severe lung damage in patients who become colonised and chronically infected. The lung damage caused by this pathogen is a major cause of morbidity and mortality in patients with bronchiectasis.

Colomycin® by inhalation is licensed for the management of adult and paediatric chronic pulmonary infections due to *Pseudomonas aeruginosa* in patients with cystic fibrosis. Its use in bronchiectasis is unlicensed but is established and common practice in many hospitals.

Treatment with nebulised anti-pseudomonal antibiotics has been shown to reduce the frequency of exacerbations of infection, hospital admissions for IV antibiotics, and reduce the rate of respiratory decline in patients. Nebulised antibiotics produce high local concentrations with low levels of systemic absorption and toxicity compared with intravenous antibiotics.

Consultant/specialist responsibilities:

- Initiation of Colomycin® prescribing - including arranging the provision of a nebuliser and appropriate giving set.
- Delivering appropriate training and assessment for the patient and/or their carer on how to use nebuliser, supplying written patient information (see Appendix).
- Counselling patient on the risks & benefits of treatment and pre dosing with a bronchodilator.
- Monitor:
 - Patient response and any adverse drug reactions (ADR) during the initiation period.
 - Sputum - once a month for 6 months (include copy to GP for information in the event of an exacerbation that may need treating due to other isolates).
 - Renal function on commencement and then in a month post commencement.
- Once a stable dosing regime has been determined patients should be issued with a supply of Colomycin® sufficient for **28 days** to allow primary care clinicians to put provisions in place for ongoing supplies.
- Inform GP when treatment should be discontinued if no improvement in the patient's condition is seen.

Both ICB and Hospital speciality respiratory nurses can order necessary equipment from the current suppliers for the area MEDIQUIP AND DICES / NRS. Training for ordering of equipment should be accessed to gain pin numbers to order equipment.

Prescribing information for GPs

Dose	Prescribe Colomycin® injection for nebulisation and sodium chloride 0.9% nebuliser liquid 2.5ml unit dose once a stable dosing regime has been determined by secondary care. The usual dose is 1-2 million units 12 hourly . Treatment is continued long term dependent on patient response to treatment and tolerability.
Caution	Myasthenia Gravis (Colomycin® reduces the amount of acetylcholine released from the pre-synaptic neuromuscular junction) Patients with porphyria or renal impairment (excreted via the kidneys). Nebulised Colomycin® may induce coughing or bronchospasm. Either pre-dosing or immediately post Colomycin® use of a bronchodilator is advisable. The first dose may be given under medical supervision (initiation to be done by specialists). Bronchial hyper-reactivity in response to Colomycin® may develop over time with continued use. Check pre- and post-dose FEV₁ in patients who report any symptoms suggestive of this.
	<ul style="list-style-type: none">• Seeking advice from secondary care if there is a significant change in the health status of the patient.• Reporting adverse reactions to the hospital respiratory specialist and community pharmacist.• Adjust/ stop treatment as requested by the secondary care clinician.

Key Contacts

University Hospitals of Derby and Burton NHS Foundation Trust

Dr P Daniel Consultant Respiratory Physician Bronchiectasis Lead Tel: 01332 787337
Dr B Popat Consultant Respiratory Physician Tel: 01332 787129
Vicky Payne/Emily Kew/Justine Lopez Respiratory Infection Nurses Tel: 01332 787159

Chesterfield Royal Hospital NHS Foundation Trust

Contact the consultant via switchboard: Tel: 01246 277271
Heather Stroud Respiratory Nurse Specialist Tel: 01246 277271

Reference

SPC Colomycin Injection: Teva UK Ltd, Accessed online at www.medicines.org.uk

BNF online accessed online <https://bnf.nice.org.uk>

Frimley Park Hospital Shared Care Guidelines for the use of nebulised Colistin: March 2006.

Leicestershire Medicines Strategy Group Shared Care Agreement for Nebulised Colomycin: January 2007

British Thoracic Society Guideline for bronchiectasis in adults [2018] accessed online <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/bronchiectasis-in-adults/>

Consultee

Dr P Daniel, Respiratory Consultant, Royal Derby Hospital
Heather Stroud, Respiratory Nurse Specialist, Chesterfield Royal Hospital
Derbyshire Medicines Management Guidelines and Shared Care Group
Si Jie Lai, Advanced Pharmacist, University Hospitals of Derby & Burton Foundation Trust
Dr I Wahenda, Consultant, University Hospitals of Derby & Burton Foundation Trust

Appendix - Information for Patients Prescribed Colomycin® Injection for Nebulisation

Introduction

Colomycin® is an antibiotic which is effective against bacteria called Pseudomonas aeruginosa. It can be given by intravenous injection or via the nebulised route.

Colomycin® injection for nebulisation is sometimes prescribed by specialist Hospital Consultants for use in patients with chronic lung conditions i.e. bronchiectasis who have had pseudomonal chest infections to try and reduce re-current chest infections. Colomycin® injection is approved (licensed) to be given by nebulisation and although it is not specifically licensed for use in patients with bronchiectasis, it is used by many respiratory units throughout the UK. Your consultant will discuss this with you, if s/he hasn't or you are unsure please ask him/her to explain it again.

The nurses will train you how to use the nebuliser and prepare the Colomycin®. Below is a reminder for you to follow at home:

Reminder: You may need to use your bronchodilator inhaler or nebuliser e.g. salbutamol, before using Colomycin® nebuliser.

Once at home you will need to get a repeat prescription from your GP for the Colomycin® and sodium chloride to mix the Colomycin®. You will also need Salbutamol if appropriate. The nebuliser equipment will be requested for you following your initial test and you will be given contact numbers to request further Side Stream Plus kits when required.

Administration

It is important that you perform chest clearance prior to having your Colomycin®; this is to ensure that the medication is able to work more effectively.

Administer your normal bronchodilator (Salbutamol / Salmeterol) either as a nebuliser or an inhaler prior to having your Colomycin®.

1. Wash hands, and prepare all equipment prior to commencement.
2. Flip off cap, tear and remove metal seal from Colomycin® vial.
3. Use 2.5ml sodium chloride 0.9% nebuliser liquid for 1million unit vial (or 4ml sodium chloride 0.9% for 2million unit vial).
4. Add sodium chloride to Colomycin® vial and wait for powder to dissolve. Do not shake as this will cause liquid to froth up, just roll in your hands until it has dissolved. Put the end of the extension hose out through the window prior to starting the Colomycin®, so that you do not expose others in room when commencing treatment.
5. Pour solution into nebuliser and nebulise until nebuliser starts to splutter and there is no vapour coming from nebuliser mouth piece.
6. Rinse and discard used Colomycin® vial.
7. Clean Side Stream Plus kit as in the booklet after each use and weekly, as directed.
8. Once cleaned dry with kitchen roll and then put some air through it from the nebuliser to ensure it is dry for the next time you use it.
9. The whole nebuliser unit needs replacing every 12 months. Inform the manufacturer when you are due a replacement by contacting them on the telephone number on your machine.

Caution

If you develop coughing and chest tightness during nebulisation of Colomycin® stop the nebuliser and take some Salbutamol 2.5mg through the nebuliser or inhaled Salbutamol through a spacer device and re-assess the symptoms.

If you still feel that you are short of breath and have a tight chest then please seek medical assessment.

Seek advice from the medical team before recommencing nebulised Colomycin®.