

## CF Guidelines - Nebulised Antibiotics

### Notes:

All nebulised drugs need a test dose with pre/post spirometry (or listen to chest in younger children) when treatment is initiated. If they have a fall in FEV<sub>1</sub> or become wheezy consider a trial of salbutamol via spacer prior to nebulised therapy. Consider stopping nebulised antibiotics for Ps.A when patients are admitted for IV antibiotics. The exception are those patients with multi-resistant strains in whom nebulised antibiotics are continued unless the patient is to receive the same antibiotic intravenously. Always consider using fast nebuliser such as eFlow or I-neb in order to aid patient adherence.

### Antibiotics:

Drug	Dose	Indication	Notes
<b>Amikacin</b>	<b>P:</b> 2500-500mg bd <b>A:</b> 500mg bd	M.abscessus	Use injection (250mg/ml) and make up to 4ml with N Saline. Patient tolerance can be poor. Can stop Tobii/Gent
<b>Ceftazidime</b>	<b>A:</b> 1g bd	Burkholderia	Tastes awful. Dissolve in 3ml of water for injection.
<b>Colistimethate Sodium</b> (Colistin/Colomycin)	<b>P&lt;2:</b> 0.1-1.0MU bd <b>P&gt;8:</b> 2MU bd <b>A:</b> 2MU bd	Ps.A	Using conventional nebulisers: 1MU - reconstitute with 4ml water 2MU - reconstitute with 2ml water May be mixed with salbutamol or gentamicin in nebuliser chamber.
<b>Colistimethate Sodium</b>	1-2 MU bd	Ps.A	Via I-neb .Significantly more expensive formulation but nebuliser provided free by company. See company directions for use.
<b>Gentamicin</b>	<b>P1-2:</b> 40mg bd <b>P2-8:</b> 80mg bd <b>P&gt;8:</b> 80mg bd <b>A:</b> 160mgbd	Ps.A S.aureus	Use IV formulation (40mg/ml) made up to 4ml with N Saline. Blood levels not required. May be mixed with colomycin.
<b>Meropenem</b>	<b>A:</b> 250mg bd in 4ml	M.abscessus Burkholderia	Reconstitute with 8ml water. Use 4ml and store 4ml in fridge for 2nd dose of the day.
<b>Tobramycin</b> (Tobi)	Only licensed in children over 6 but is used >6 months. 300mg bd. 28 days on/28 days off.	Ps.A - See individual guidellne.	Ready prepared - no dilution needed. In severe patients nebulised colomycin may be prescribed in month off Tobi. If using Via I-neb need to nebulise twice.
<b>Vancomycin</b>	<b>P:</b> 5mg/kg bd <b>A:</b> 250mg bd	M.R.S.A	Use water for injection for reconstitution. Nebulise with Turboneb compressor. Monitor for bronchospasm.

### Antifungals:

Drug	Dose	Indication	Notes
<b>Amphotericin - Neb</b> (Fungisone)	<b>P&lt;10yr:</b> 5mg bd <b>P&gt;10yr:</b> 10mg bd	Candida	Dilute 50mg vial in 10ml of water, make 5mg/ml. Dilute this with further water. Up to 4ml for nebulisation.
<b>Ambisone - Neb</b> (Liposomal Amphotericin prep)	<b>A:</b> 25mg bd for 10 days	Candida	Use if standard nebulised Amphotericin preparation cannot be tolerated. Dissolve 50mg vial with 12ml sterile water. Nebulise with Turboneb compressor. Monitor for bronchospasm.

**Antiseptic:**

<b>Drug</b>	<b>Dose</b>	<b>Indication</b>	<b>Notes</b>
<b>Tauroidine Solution 2%</b>	4ml of 2% solution bd	Burkholderia - when other options are failing. (Broad spectrum activity against bacteria & fungi)	Unlicensed antiseptic/ antiendotoxin. May cause bronchospasm, cough, burning sensation. Give test dose. Casereportsbeneficial. Single small RCT in CF showed no benefit.

**Mucolytics/Mucokinetics:**

<b>Drug</b>	<b>Dose</b>	<b>Indication</b>	<b>Notes</b>
<b>DNASE</b> (Dnase Alfa-Pulmo- zyme)	2.5ml od	See specific protocol	As "n=1" trial to asses effect. Then trial to see whether alt day as effective. May use bd in patients with severe disease or during exacerbations.
<b>Hypertonic Saline</b> (Mucoclear 6%)	4ml bd-qds	See specific protocol	As "n=1" trial to assess efficacy

Document approved - December 2011  
Document due for review - December 2013

**Acknowledgements:** *The Peninsula CF team acknowledges the use of guidelines produced by The CF Trust, Manchester, Papworth, Leeds and Brompton CF teams during development of these local Peninsula protocols and guidelines.*