Y Grŵp Gweithredu ar Iechyd Anadlol
Respiratory Health Implementation Group

GIG CYMRU NHS WALES

All Wales Pathway for Managing Adult non-CF Bronchiectasis Patients with Pseudomonas Aeruginosa Infection in the Community

Clinical Pathway

All Wales Pathway for Managing Adult non-CF Bronchiectasis Patients with Pseudomonas Aeruginosa Infection in the Community

STEP 1: DIAGNOSIS

Confirm presence of pseudomonas aeruginosa in sputum

Endeavour to send sputum at start of an exacerbation.
Treat empirically while awaiting results of sputum.

STEP 2: ASSESSMENT

Clinical deterioration

If unable to cope at home admit to hospital

STEP 3: TREAT

Optimise condition:
Check inhaler technique
Airways clearance technique
Smoking cessation
Fluid intake

First line treatment

Ciprofloxacin

750mg BD
14 days

Second line treatment

Commence if first line treatment failure or known resistance, isolate to ciprofloxacin

Ceftazidime

2g BD IV
14 days

STEP 4: LONG-TERM MANAGEMENT

To be initiated in secondary care

Nebulised Colomycin

2MU neb BD

If unable to tolerate Colomycin or ongoing deterioration, consider:

- Tobramycin 160mg neb BD, or
- Gentamicin 80mg neb BD (To be initiated in secondary care).

RHIG Version: 1.2
June 2020

Designed by The Institute of Clinical Science & Technology

More information at:
icst.info/managing-adult-non-cf-bronchiectasis-patients-with-pseudomonas-aeruginosa

STEP 1 INFORMATION:
DIAGNOSIS

Confirm diagnosis

Some patients may be undiagnosed - suspect **Bronchiectasis** in those with:

- Chronic sputum production
- Repeated courses of antibiotics

(Diagnosis requires CT scan to demonstrate airways enlargement)

Patients with **COPD** may become colonised with pseudomonas

Patients with **Cystic Fibrosis** should be managed in specialist units. All Wales Adult CF Centre contact **02920715382**

STEP 2 INFORMATION:
ASSESSMENT

Clinical deterioration

Clinical:

- Purulent sputum
- Increased sputum
- Increased breathlessness
- Fever, malaise, lethargy

Social:

- Frailty/Social support/Ability to cope

Investigations:

- CXR
- Send sputum for routine and mycobacterial culture
- Routine blood test including FBC, U&E, CRP, LFT

Consider hospital admission if any red flags

Hospital admission for adults who:

- Are cyanosed or acutely confused
- Have a respiratory rate of > 25 breaths per minute
- Have signs of cardiorespiratory failure, e.g.:
  - Marked breathlessness
  - Rapid respiration
  - Laboured breathing
  - Worsening peripheral oedema
  - Oxygen saturation < 93% on room air
- Have a temperature of ≥ 38°C
- Are unable to take or have failed to respond to oral therapy
- Have pleuritic pain severe enough to inhibit coughing and the clearing of secretions

STEP 3 INFORMATION:
TREAT

First line - Ciprofloxacin

Warn patients of risk of tendinitis and sensitivity to sunlight (risk increased with steroids).

Reduce dose as per BNF if impaired creatinine clearance

Failure to improve requires switch to IV therapy (second line)

Second line - Ceftazidime

If allergic:- discuss with local microbiology team

Can manage in the community when clinically stable and able to cope at home

Insert Mid-line (requires trained individual)

Adjust dose as required with creatinine clearance/LFT derangement

Monitor symptoms and check CRP

Encourage airway clearance techniques

If possible ensure objective measure of spirometry is completed at end of IVs

STEP 4 INFORMATION:
LONG-TERM MANAGEMENT

Nebulised Colomycin (Colistimethate sodium)

Ensure patient is recurrently isolating Pseudomonas

Nebulised Colomycin reduces exacerbation frequency in those with pseudomonas

Ensure first dose is supervised as risk of bronchospasm

SABA may reduce bronchospasm

Perform spirometry testing pre and post dose

BD: Twice a day
BNF: British National Formulary
CRP: C-Reactive Protein
CXR: Chest x-ray
FBC: Full Blood Count
IV: Intravenous
LFT: Liver Function Tests
neb: Nebuliser
SABA: Short-Acting Beta Agonist
UTE: Urea and Electrolyte