

Management of Community Acquired Pneumonia (CAP)

Introduction

Acute respiratory illness is one of the most common presentations in General Practice. However only a small proportion of these patients will have pneumonia, and it requires skill to separate those who may need antibiotics from the majority who do not. Unnecessary use of antibiotics for upper respiratory tract syndromes that resemble pneumonia is a major driver of cost and antibiotic resistance.

Confirming the diagnosis

Although symptoms (such as shortness of breath, cough and purulent sputum) and signs (such as tachypnoea, focal crackles or bronchial breath sounds) can suggest the diagnosis, clinical diagnosis is rarely accurate and a chest X-ray is needed to confirm the presence of new infiltrates.

Patients with normal chest X-rays are unlikely to benefit from taking antibiotics. A chest X-ray is appropriate when clinical signs suggest CAP or when vital signs are more abnormal; e.g. heart rate ≥ 100 beats/min, respiratory rate ≥ 25 breaths/minute or oxygen saturations $\leq 94\%$. If the pneumonia patient has a productive cough, sputum sent for microscopy and culture is mainly useful if performed before any antibiotics have been given.

Is the patient likely to need admission?

Features of severity that suggest the need for hospitalisation are severe breathlessness, confusion, inability to maintain oral intake, hypotension, multilobar or bilateral changes on chest X-ray and, if available, low pulse oximetry levels.

What treatment is appropriate for non-admitted patients?

The majority of cases of CAP are due to *Streptococcus pneumoniae*, respiratory viruses, *Mycoplasma pneumoniae*, *Haemophilus influenzae*, *Chlamydophila* species and *Legionella* species.

Appropriate treatment choices include:

- Amoxicillin (Alphamox, Amoxil, Cilamox, Moxacin) 500mg tds
- Doxycycline (Doryx, Doxsig, Vibramycin) 200mg stat then 100mg daily
- Roxithromycin (Biaxig, Roxar, Roxide, Rulide) 300mg daily
- Clarithromycin (Clarac, Clarihexas, Kalixocin, Klacid) 250mg bd
- Cefuroxime (Zinnat) 500mg bd (if penicillin allergic)
- Moxifloxacin (Avelox) 400mg daily (if severe penicillin hypersensitivity)
- Combination therapy with amoxicillin plus either doxycycline or roxithromycin is also appropriate in more severe cases.

Less appropriate choices:

- Cefaclor (Ceclor, Karlor, Keflor, Ozcef) – poor spectrum, weak antibacterial activity and high incidence of rashes
- Cephalexin (Cilex, Ialex, Ibilex, Keflex, Rancef) – poor spectrum for CAP
- Amoxicillin/clavulinate (Augmentin, Clamoxyl, Clavulin, Curam, Moxiclav) – excessively broad-spectrum for most cases (with the exception of nursing home acquired-pneumonia and those who have received multiple recent courses of antibiotics)

Therapy Duration

Most cases of mild to moderate CAP only need 3 – 5 days of therapy.

Follow up of those patients who were admitted with CAP

Following discharge, CAP patients should see their GP in the following 1 – 2 weeks if older and with potentially unstable co-morbidities. Chest X-ray should be repeated to confirm clearance of infiltrates after 6 weeks in all patients older than 40 years and in smokers. Failure to clear the infiltrates should prompt further investigation for underlying causes such as lung malignancy or impaired immune system (e.g. HIV).

Austin Health ‘Hospital in the Nursing Home’ Program

Some nursing home patients with pneumonia may have illness severe enough to warrant intravenous therapy but at the same time have conditions such as dementia that make transfer to hospital less desirable.

The Austin Emergency Department now has an outreach program to local nursing homes that will allow for the administration of IV antibiotics like ceftriaxone as well as medical review. For information about how to access this program and make referrals contact **0422 006 655** Mon – Fri 9.00 am – 5.00 pm.