

Guidance on Antibiotic Choice in Penicillin Hypersensitivity

Clinical judgement MUST be used if adequate information about a patient's history of penicillin allergy is difficult to obtain.

Background

A significant percentage of patients (up to 90%) labelled as penicillin allergic are not truly allergic. This results in patients having treatment withheld unnecessarily which might subsequently affect their clinical outcomes and result in increased cost (up to 60% higher than non penicillin allergic patients) and an increased potential for more adverse reactions e.g. *C. difficile*.

Patients with a history of atopic allergy - (e.g. asthma, eczema or hay fever) are more likely to be allergic to penicillin.

True/Severe penicillin allergy

Definition: Anaphylaxis, urticaria or rash immediately after penicillin administration.

- Only between 1 and 10% of exposed patients develop general hypersensitivity reactions
- True anaphylaxis only occurs in less than 0.05% of treated patients
- Hypersensitivity gives rise to immediate reactions including anaphylaxis, angioedema, urticaria and some maculopapular rashes
- Late reactions may include serum sickness like reactions and haemolytic anaemia

Action: DO NOT administer penicillins to patients who have:

- A history of immediate hypersensitivity including anaphylaxis
- A history of any of the following ; urticaria, laryngeal oedema, bronchospasm, hypotension or local swelling within 72 hours of penicillin administration

The following antibiotics are Penicillins and are **contra-indicated** in penicillin allergy

- Amoxicillin, Benzylpenicillin, Co-amoxiclav, Flucloxacillin, Penicillin V (Phenoxymethylpenicillin), Piperacillin/Tazobactam, Pivmecillinam, Temocillin and the 1st generation cephalosporins Cefalexin, Cefradine

Non-severe allergy/intolerance to penicillins

Definition: Minor rash (non confluent or non pruritic rash restricted to a small area) or rash occurring after 72 hours or patients with a vague history or gastro-intestinal intolerance

Action: The following antibiotics can be used with caution in non-severe penicillin allergy (e.g. in life threatening situations where alternative antibiotic is unavailable - careful monitoring is required)

- 2nd and 3rd generation cephalosporins - cross sensitivity between 0.5 -6.5% (e.g. Cefixime, Cefotaxime, Ceftazidime, Ceftriaxone, Cefuroxime)
- Other beta-lactam antibiotics – cross sensitivity approx 1% (e.g. Aztreonam, Ertapenem, Imipenem, Meropenem)

Antibiotics safe to use in Penicillin allergy:

- Tetracyclines (e.g. doxycycline), Aminoglycosides (e.g. gentamicin), Macrolides (e.g. clarithromycin), Clindamycin, Sulphonamides (e.g. co-trimoxazole), Trimethoprim, Metronidazole, Quinolones (e.g. ciprofloxacin), Vancomycin or Teicoplanin