Suspected or proven allergic reaction on a β-lactam with mild symptoms*

- Do not delay surgery and give cephalosporin from different R side-chain group (Table 2).

*Mild symptoms: skin rash > 2 hours after exposure to suspected allergen

Avoid all betalactams*

- Refer for expert allergy testing

*Alternative antibiotics depend on local guidelines, but include
  - Vancomycin and clindamycin for gram positive cover
  - An aminoglycoside or fluoroquinolone for gram negative cover
  - Metronidazole for anaerobic cover

Expert allergy testing possible without delay of surgery?

YES

Refer for expert allergy testing

NO

Cefazolin available at your clinic?

YES

Do not delay surgery and give cefazolin prophylaxis

NO

Suspected penicillin/amoxicillin/ampicillin allergy

YES

Do not delay surgery, avoid all penicillins and give cephalosporin from different R side-chain group (Table 2).

NO
Penicillins | 1st generation cephalosporins | 2nd generation cephalosporins | 3rd generation cephalosporins
---|---|---|---
Penicillin | Amoxicillin | Cefalotin | Cefuroxime
Amoxicillin | Ampicillin | Cefazolin | Cefuroxime
Cefalotin | Cefadroxil | Cefalodrine | Cefuroxime
c | Cefuroxime
Cefazolin | Cefalodrine | Cefuroxime | Cefuroxime
Cefadroxil | Cefuroxime | Cefuroxime | Cefuroxime
Cefalodrine | Cefuroxime | Cefuroxime | Cefuroxime
Cefuroxime | Cefuroxime | Cefuroxime | Cefuroxime

Mostly Gram+ | Gram +/- | Mostly Gram-

Table 2: Table indicating similarities in R1 or R2 side chain structures attached to the β-lactam ring. Antibiotics with similar side chains as an antibiotic with suspected allergy (indicated by R1, R2) are advised to be avoided. When an allergy to a penicillin is suspected, we advise to avoid all penicillins, indicated by a cross.

R1 = identical R1-side chain;
R1s = similar R1 – side chain
R2 = identical R2-side chain;
R2s – similar R2-side chain
R is the main penicillin side chain.

Not included in this table are: Cefmenoxime, Cefditoren, Cefonicid, Aztreonam, Cefepime, Cephapirin, Cefpirome, Cefditobut, Cefdinir, Cefixime, Cefizime