

Cephalosporins often safe in patients allergic to penicillin

Clinical question What is the evidence regarding the use of cephalosporins in patients with penicillin allergy?

Bottom line The risk of cross-reactivity between penicillin and cephalosporins has been overestimated for second- and third-generation drugs. It is only a significant risk in first-generation cephalosporins that have a similar side chain to penicillin (cefalotin, cefalexin, cefadroxil and cefazolin). With appropriate monitoring clinicians could consider using second- and third-generation cephalosporins in these patients.

Synopsis The author did a comprehensive search of MEDLINE and EMBASE to identify the 101 articles that were used as the basis for this systematic review. The overall rate of rash is approximately 2 per cent. Anaphylaxis is very rare, with a risk between 0.1 per cent and 0.0001 per cent. Clinicians often worry about cross-reactivity between penicillins and cephalosporins, but this only seems to apply to first-generation cephalosporins such as cefalotin, cefaloridine, cefalexin, cefadroxil and cefazolin. No increase in the risk of an allergic reaction is seen in second-

and third-generation cephalosporins, including cefprozil, cefuroxime, ceftazidime, cefpodoxime and ceftriaxone. The author speculates that this is because of similar side chains in the chemical structure between penicillins and first-generation (but not second- or third-generation) cephalosporins. Patients with a previous IgE-mediated reaction to penicillin (eg, wheezing, angio-oedema, urticaria, laryngeal oedema or anaphylaxis) should not use first-generation cephalosporins but may be able to safely take second- and third-generation cephalosporins.

Level of evidence 2a (systematic review of cohort studies, with homogeneity)

Reference Pichichero ME. Cephalosporins can be prescribed safely for penicillin-allergic patients. *Journal of Family Practice* 2006;55:106–12.

Funding Unknown/not stated

*POEM (Patient Oriented Evidence that Matters) is a registered trade mark of InfoPOEMS
© InfoPOEM Inc 1995-2006 InfoPOEM. www.infopoems.com*