



Can tetracyclines and penicillins be used together?

Dear Editor,

With regard to your article: "Appropriate use of tetracyclines" (BPJ 47, Oct 2012), I have always understood that as tetracyclines are bacteriostatic in action and penicillins act on the cell wall of actively growing bacteria they should not be used together, as the former will stop the latter working.

As you are recommending, amongst others, giving amoxicillin with doxycycline for some conditions, am I wrong in my understanding or is it just that it does not happen in practice?

Chris London, Pharmacist
Milton

In New Zealand there are four tetracyclines available, doxycycline (fully subsidised), minocycline (partially subsidised), lymecycline (not subsidised) and demeclocycline (available under section 29, not subsidised). You are correct that, in theory, tetracyclines may antagonise the bactericidal activity of beta-lactam antibiotics, which includes penicillins and cephalosporins. However, there is little evidence to suggest that this is a clinically significant interaction. This interaction is also not listed in major drug interaction resources, such as Stockley's Drug Interactions.¹

In vitro studies have shown a strong synergistic relationship between amoxicillin and tetracyclines.² The empiric use of either a macrolide or a tetracycline to cover atypical bacteria in moderate to severe community-acquired pneumonia (CAP) is recommended by international guidelines.^{3,4} However, there are few studies that compare the efficacy of beta lactam and

tetracycline combinations with other antibiotic treatments for CAP. One large Australian retrospective study published in 2012 compared the efficacy of beta-lactam + macrolide vs beta-lactam + doxycycline in 855 patients for the treatment of CAP. Both regimens demonstrated similar outcomes against CAP due to either atypical or typical pathogens.⁵ This study provides further reassurance that this interaction is not clinically significant, and tetracyclines and amoxicillin may be safely used together.

References

1. Baxter K (ed). Stockley's Drug Interactions 9. London: Pharmaceutical Press; 2012. Available from: www.medicinescomplete.com (Accessed Nov, 2012).
2. Olajuyigbe O. Synergistic influence of tetracycline on the antibacterial activities of amoxicillin against resistant bacteria. *J Pharm Allied Health Sci* 2012;2:12-20.
3. Therapeutic Guidelines Limited. Therapeutic guidelines: Antibiotic. Version 14. Melbourne: Therapeutic Guidelines Limited; 2010.
4. Mandell L, Wunderink R, Anzueto A. Infectious Diseases Society of America/American Thoracic Society consensus guidelines on the management of community acquired pneumonia in adults. *Clin Infect Dis* 2007;44(suppl 2):s27-72.
5. Teh B, Grayson ML, Johnson PD, Charles PD. Doxycycline vs macrolides in combinations therapy for treatment of community acquired pneumonia. *Clin Microbiol Infect* 2012;18(4): E71-3.

Recording of immunisations in Medtech

Dear Editor,

I would like to raise a concern that we have noted at our Health Centre over the last year or so, to draw it to the attention of other general practices who may not be aware of this issue.

When the Immunisation Schedule was changed in 2008, the 11-year-old vaccination was changed from DTaPIPv (diphtheria, tetanus, pertussis and polio) to DTaP, i.e. the polio was removed. I think the IPV component was phased out gradually. What we discovered was that the Medtech recall schedule for the 11-year-olds who had started on the previous schedule displayed DTaPIPv as the vaccination due, so our nurses recorded this as being given rather than cancelling this recall and entering DTaP separately. We managed to search for all the affected children and alter their records retrospectively but we are aware from incoming medical records that other practices may have fallen into the same trap.

It is not a major problem but we found that the children being vaccinated were being wrongly recorded as having received a dose of Polio vaccine at age 11 years, when their last one was actually at age four years. This may have implications for future overseas travel risks. The problem will obviously have a limited lifespan as children grow up adhering to the 2008 schedule, but it may recur when other changes to the Schedule are made in future.

*Dr Phil White, General Practitioner
Dunedin*

**We value your feedback. Write to us at:
Correspondence, PO Box 6032, Dunedin
or email: editor@bpac.org.nz**

Thank you for bringing this to our attention. This issue has also been highlighted in two separate reports in the bpac^{nz} "Patient safety incident reporting system". Clinicians are encouraged to regularly review these incident reports and use the comment function to provide feedback and generate discussion.

 **Visit: www.bpac.org.nz/safety/home.aspx**


To locate the incident reports on the immunisation issue, click on "review individual reports" then select the "documentation" category.

News update: The catch-up period for immunisations has been extended

Children and adults, who have missed immunisations as recommended on the New Zealand Immunisation Schedule, are encouraged to "catch-up" on these vaccines.

The eligibility for funded catch-up immunisations has now been extended to include adolescents aged up to 18 years (from the previous age of eligibility of up to 16 years). All young people entitled to free or subsidised health care in New Zealand, e.g. citizens, residents, migrants and refugees, may receive funded catch-up doses or vaccines. Adults must meet the cost of catch-up immunisations themselves.

N.B. The eligible age for funded catch-up doses of the HPV vaccine for females is age 20 years.

 For further information on the immunisation schedule or planning a catch-up immunisation programme, see: "How to plan a catch-up immunisation programme", BPJ 45 (Aug, 2011).