Macrolides + Penicillins

Although there is in vitro evidence of antagonism between erythromycin and penicillins, this combination has been used successfully to treat community-acquired pneumonia.

Clinical evidence, mechanism, importance and management

Some in vitro evidence suggests that antagonism may occur between erythromycin (a bacteriostatic drug) and penicillins (bactericidal drugs) when they are used against staphylococci and Streptococcus pneumoniae. However, another study has suggested that this in vitro antagonism against S. pneumoniae between ‘penicillin’ and erythromycin is minimal and dependent on the interpretative criteria applied. Clinical evidence for this interaction is apparently lacking, and the combination is generally used successfully for pneumonia.

In the UK, the combination of amoxicillin and erythromycin or another macrolide (e.g. azithromycin or clarithromycin) has been recommended by the British Thoracic Society (BTS) for adult patients with non-severe community-acquired pneumonia who require hospital admission. In addition, the BTS has recommended an intravenous combination of a beta-lactamase stable antibacterial such as co-amoxiclav (amoxicillin with clavulanic acid) with a macrolide (erythromycin or clarithromycin) for severe community-acquired pneumonia in hospitalised patients.

References
