Letters

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'One for all' concerns regarding NICE antibiotic guidelines on suspected bacterial meningitis!

The most common bacteria causing meningitis include *Streptococcus pneumoniae*, *Neisseria meningitides,* and *Haemophillus influenzae*. Guidelines issued by the National Institute for Health and Clinical Excellence (NICE) in regards to bacterial meningitis recommend administration of benzylpenicillin for children and young patients with suspected meningococcal disease in the pre-hospital setting. This is in accordance with existing advice issued by the chief medical officer.[1,2] However, when the same patient comes in to hospital, the advice on the empirical antibiotic choice changes to third generation cephalosporins (with or without high dose amoxicillin depending on risk factors for *Listeria monocytogenes* infections) this means that, essentially, the same patient can be prescribed different antibiotics depending on where he or she is first seen!

At present there is convincing evidence suggesting an independent incremental association between 'delays' in administering 'the correct' antibiotics and mortality from acute bacterial meningitis.[5] In addition, we know that delay in commencing adequate antibiotic therapy in septic shock cases is associated with higher mortality, and the use of inappropriate antibiotics is associated with higher mortality in blood stream infections.[6–8] Penicillin resistant rates among UK *Haemophillus* species isolates is 17.7% and penicillin intermediate *S. pneumoniae* is 10.8%. In a Scottish study the prevalence of moderate penicillin resistant meningococci was 8.3%, the majority of isolates (52.2%) belonged to serogroup B,[3,4] and according to the same NICE guidelines the prevalence of *Haemophillus* resistance to third generation cephalosporins is almost zero. There is currently a low prevalence of pneumococcal cefotaxime/ceftriaxone resistance in the UK, with only 1.7% of strains reported to have intermediate or high resistance to cefotaxime between 2004 and 2007. Given these numbers it is unclear as to why NICE is still recommending benzylpenicillin.

Paul Erlich's '*Frapper fort et frapper vite*' statement is correct, however, in addition to 'hit hard and hit fast' we believe that in these cases we need to 'hit right' to achieve a more favourable outcome. Therefore, the choice of empirical antibiotic should be the same both in pre- and post-hospital settings, and benzylpenicillin in the doctors bag should be replaced with a third generation cephalosporin, for example, cefotaxime, to be administered to patients in a timely manner, unless of course there is history of true beta-lactam allergy or other contraindications.

Kordo Saeed,

Consultant Microbiologist, Royal Hampshire County Hospital, Romsey Road, Winchester, SO22 5DG.
E-mail: kordosaeed@nhs.net

Timothy Stannard,

Friarsgate Practice, Winchester.

Matthew Dryden,

Royal Hampshire County Hospital, Winchester.

Helen Lambert,

Friarsgate Practice, Winchester.

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Response from NICE

We are grateful for the opportunity to provide some comment following the letter by Saeed *et al*[1] that points out an apparent discrepancy between NICE recommendations[2] for primary care antibiotic therapy (penicillin) and secondary care management (ceftriaxone) and makes a case for availability of a third generation cephalosporin in the GPs 'black bag'.

Unfortunately, the authors' arguments are based on a fundamental misunderstanding of the guidance as the population they discuss should not have been given antibiotic therapy in the first place. The only population for whom there is a recommendation for universal pre-hospital antibiotic therapy in this setting are those with suspected meningococcal disease (both meningococcal meningitis and septicaemia), that means patients who are ill with a non-blanching rash. The previous chief medical officer's (CMO's)[3] advice and the NICE guideline[2] only refers to these patients. The arguments about *Haemophilus influenzae* type B meningitis and pneumococcal meningitis put forward by the authors, although microbiologically correct, are irrelevant as such patients with suspected meningitis and no rash should not receive pre-hospital antibiotics.

The reason for avoiding antibiotics in non-meningococcal meningitis is that such