Recent advances in the treatment of bacterial infections in cystic fibrosis

This is a review of the latest developments in antibacterial therapy in cystic fibrosis, largely describing recent trials of established antibiotics, either singly or in combination.

There are many typos, grammatical and spelling errors in the text, which will need to be corrected before publication.

Abstract
1. Since the study which added oral ciprofloxacin to inhaled tobramycin did not achieve statistical significance, it would be more correct to state “may” rather than “seems to” reduce lung inflammation.

2. Penultimate sentence – it should be made clear that the lack of effect was in patients who were not already infected with Pseudomonas.

3. In the last sentence, “improve” makes better sense than “give any improvement”.

Review
1. PMN needs definition.

2. Several other species…… (last sentence of paragraph 1) also contribute to the mortality, as well as morbidity.

Current Strategies…..
1. First paragraph, 2nd sentence – it would be better to state “includes” rather than “consists of e.g.”

2. The concept of conducting and respiratory zones is well established. Although inflammatory cells are present in the respiratory zone, I am not aware that this area is actually infected, but is in fact damaged as a consequence of progressive bronchiectasis due to infection in the conductive zone. The damaging organisms live in biofilms, which do not occur in the respiratory zone. If the author wishes to postulate the former, then this will need suitable references.

Inhaled versus systemic antibiotics…..
1. The Noah paper quoted here had many flaws, not the least of which were the
haphazard way in which patients were given different therapies and the small numbers in each group. This effectively prevented any meaningful statistical analysis. To state that “the study was therefore underpowered which explains why most of the results were non-significant” implies that greater numbers would have proved the point, but in fact greater numbers may simply have disproved the point. This paragraph should be rewritten to consider this.

Nebulized Aztreonam Lysine…..

1. This section describes the 3 trials in great detail and as such is confusing. It could be rewritten in a much truncated and concise form which would still get over the message that this agent works, more so tds than bd, but increases antibiotic resistance if given continuously and therefore should be used in a month-on month-off protocol.

Effect of azithromycin…….

1. Although this study did not show an improvement in lung function, it did reduce the frequency of exacerbations, and as such may be a useful additional therapy in CF patients without Pseudomonas infection. The statement “the outcome, however, was negative” (penultimate sentence) should be altered to reflect this.

Finally, there are two developments in antibacterial therapy that this review does not mention – that is, the development of dry powder inhaled preparations of colomycin and high dose tobramycin. These will be at least as important as the other developments mentioned, since they will diminish the length of time taken for inhaled therapy, currently one of the major contributors to poor compliance. The author should therefore include these studies in this review.