increases in pH. It is known that the prostatic fluid may become markedly alkaline, a situation that should not influence the activity of daptomycin. All these data might support the rationale for the use of daptomycin in chronic bacterial prostatitis involving enterococci, particularly when antimicrobials included in primary regimens demonstrate inefficient in vitro activity due to resistance mechanisms. This is an area of clinical investigation that may improve the treatment of patients with chronic enterococcal prostatitis.

Transparency declarations

R. C. and A. P. J. have received honoraria for speaking from Novartis and Pfizer. P. R.-G. has no conflicts of interest to declare. R. L. C. is an employee of Novartis Pharma AG, and as such owns stock options with the company. R. L. C. has no other conflicts of interest to declare.

The authors did not receive honoraria for writing this reply.

A. P. J. is Editor-in-Chief of JAC, but took no part in, and did not influence, the editorial process.

References

against use of tigecycline to treat pulmonary exacerbations in CF patients. Besides, in poorly penetrated anatomic sites such as lung tissue, this may induce the development of resistance.

As Mycobacterium abscessus is increasingly involved in pulmonary infection in CF patients, we do agree with the authors that tigecycline offers exciting therapeutic potential for the rapidly growing mycobacteria (M. abscessus, Mycobacterium chelonae and Mycobacterium fortuitum). Although the clinical data are rather scarce, the susceptibility and PK–PD data seem promising. As the reported MIC90 for M. abscessus is 0.25 mg/L, the expected AUC90/MIC90 for this pathogen would be 36 in lung tissue and 9.12 in epithelial lining fluid, when calculated as mentioned above.1,6

However, we think that in order to make recommendations concerning tigecycline use in CF patients, human studies to define AUC90/MIC90 for the colonizing/infected pathogens are needed. We therefore currently agree with the FDA drug safety communication of January 2010 that warned not to use tigecycline in pulmonary infections, especially hospital-acquired and ventilator-associated pneumonia, because of increased mortality risk.

Achromobacter xylosoxidans, pharmacokinetics, pneumonia

Sir,

In response to the comments of Cooreman and Jeurissen1 on our recent article we would like to make several clarifications. Although Pseudomonas aeruginosa remains the most commonly isolated pathogen in cystic fibrosis (CF), this pattern is changing. The practice of early eradication of P. aeruginosa with aerosolized antibiotics has become the standard of care.2 In clinics in which this practice has been aggressively adopted, P. aeruginosa prevalence rates have dwindled to <5% in those CF patients <18 years of age.3 Accordingly, CF physicians are increasingly treating pulmonary exacerbations (PEx) caused by pathogens other than P. aeruginosa such as Stenotrophomonas maltophilia, Achromobacter xylosoxidans, Staphylococcus aureus and so on. It is PEx with these pathogens, and not P. aeruginosa, for which we have advocated the use of tigecycline, as clearly indicated in our review.

The FDA has recently released a drug safety communication cautioning practitioners on the use of tigecycline in severe infections based on the pooled analysis of 13 trials involving >7000 patients where all-cause mortality was observed to be increased by 0.6% [95% confidence interval (CI) 0.1–1.2] relative to comparator antibiotics.4 However, the FDA did not warn that tigecycline should not be used in pulmonary infections as asserted by Cooreman and Jeurissen.5 Furthermore, community-acquired pneumonia remains an approved indication for the use of tigecycline. Most of the increased mortality in tigecycline-treated patients was attributable to hospital-acquired pneumonia, in particular, ventilator-associated pneumonia (VAP). This observation may not be relevant to CF PEx, a disease for which no antibiotic has an FDA-approved indication. PEx in CF are overwhelmingly caused by chronically colonizing pathogens and not through the new acquisition of pathogens,6,7 and as such the empirical provision of PEx antibacterials based on prior sputum results is commonplace and supported. The bacteriostatic nature of tigecycline, postulated to be a potential detractor in the management of respiratory infections, is not relevant in CF PEx as eradication of chronically infecting pathogens is generally not possible.8 The use of tigecycline in CF has been reported only rarely, but clinical outcomes have been favourable.8

CF-specific pharmacokinetic data for tigecycline (as well as for many antibiotics) continue to be lacking and the lower AUC data observed in patients in tigecycline trials with VAP and associated lower clinical cure rates9 emphasize the importance of understanding the pharmacokinetics of antimicrobials in disease-specific settings. With the increasing burden of multidrug-resistant pathogens in CF and their associated increased risk of mortality,10 new therapeutic options are desperately required.

Letters to the Editor

References


J Antimicrob Chemother 2011
doi:10.1093/jac/dkr036
Advance Access publication 3 March 2011

Newer antibacterial agents and their potential role in cystic fibrosis pulmonary exacerbation management—authors’ response

M. D. Parkins1–3* and J. S. Elborn3,4

1Department of Medicine, University of Calgary, Calgary AB, Canada; 2Department of Microbiology and Infectious Disease, University of Calgary, Calgary AB, Canada; 3Northern Ireland Regional Adult Cystic Fibrosis Centre, Belfast City Hospital, Belfast, UK; 4Centre for Infection and Immunity, Queen’s University of Belfast, Belfast, UK

*Corresponding author. Department of Medicine, Foothills Medical Center, 1403 29th Street NW, Calgary, AB, Canada. Tel: +1-403-220-5951; Fax: +1-403-270-2772; E-mail: mdparkin@ucalgary.ca

Keywords: tigecycline, pharmacokinetics, pneumonia

Transparency declarations

None to declare.