Bacteremia in patients with febrile neutropenia following chemotherapy

Adequate antimicrobial therapy initiated as early as possible following the onset of infection has been shown to positively impact on an individual's prognosis.[1] As the epidemiology of pathogens causing hospital-acquired infections is dynamic, knowledge of local ecology data is of key importance when making this assessment.[2,3]

In the latest issue of the *International Journal of Infectious Diseases* we read with interest the article by Dr Baskaran and co-workers in which the authors aimed to determine local patterns and antibiotic susceptibilities of pathogens causing bacteremia in patients who developed febrile neutropenia after having received chemotherapy.[4] However, we want to comment on some specific aspects regarding the methodology used and the conclusions formulated.

Firstly, patients with febrile neutropenia due to recent chemotherapeutic treatment are commonly perceived as very sick patients, and as such one might suppose that: (1) they more frequently present either infectious or non-infectious signs of systemic infection, and (2) consequently the threshold for sampling blood for culture in this cohort should be lower as compared to other general ward patients.[5] Nevertheless, the authors did not elucidate whether a particular protocol and/or procedure was available for performing blood cultures.

Secondly, 23.3% of all infective foci were reported to be line-related infections.[4] In our opinion this is an overestimation of the true incidence in their setting, which can, at least partly, be explained by the definition used. The authors considered infection to be line-associated if there was 'clinical' evidence of line infection or if the criteria for bacteremia were satisfied in the absence of other sites of infection. With respect to the latter, which is bacteremia with unidentifiable inciting focus, we think primary bacteremia would be a more appropriate definition.[6,7]

Finally, as correctly stated by Dr Baskaran and co-workers, surveillance may be another important issue for monitoring rates of multiple-drug resistant organisms. Moreover, as demonstrated in two studies by our group, Depuydt et al. showed that based on general risk factors and knowledge of the patient colonization status as assessed by regular surveillance cultures, surveillance-assisted initiation of empirical antibiotics performed significantly better as compared to strict empirical regimens proposed by our national guidelines.[8–10] In doing this, the use of last-line and broad-spectrum antibiotics (e.g., fluoroquinolones, aminoglycosides, and glycopeptides) could be substantially reduced, and probably also antibiotic-related costs.[9,11] However, non-anti-pseudomonal beta-lactams and carbapenems as empirical regimen were prescribed more often, the latter only for those patients identified to be colonized with *Pseudomonas aeruginosa*. We would appreciate further elaboration of these issues from the authors.

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