Blood Cultures for Men with Febrile Urinary Tract Infection

We have read with interest the article by Etienne et al. in which the authors evaluate the value of blood cultures (BC) in patients with acute prostatitis (AP) (1). Since our group has a particular interest in these patients, which are included in a database, we would like to make some comments regarding the article.

First of all, as pointed out by Etienne et al. in a previous article from which the patients of the aforementioned article were recruited, the diagnostic criteria for AP are not well defined (1). Although it has been well demonstrated with different diagnostic methods, such as measurement of the serum prostate-specific antigen (3) and the use of transrectal prostatic ultrasonography (3) and leukocyte scintigraphy (5), that the prostate is the organ most frequently involved in males with febrile urinary tract infection (UTI), in our clinical experience, this is not always the case, even for patients with a painful prostate palpation. Therefore, we prefer to use the more generic term “men with febrile UTI” at least until more agreement in the definition of AP exists.

The issue of whether BC could be useful in UTI has been, among others, evaluated by Velasco et al., who concluded that BC provided no useful information for clinical management of acute pyelonephritis, but the study excluded women with complicated UTI and men (4). Thus, Etienne et al. are the first to evaluate the diagnostic and prognostic value of BC for patients with AP. In their study, they found that 21% of the patients had positive BC and that these patients contributed to microbiological diagnosis in 5% of the cases. After reviewing our database, we have observed that 20 out of 89 (22%) male patients with febrile UTI, from which BC were drawn, had positive BC, which contributed to microbiological diagnosis in 4 cases (4.5%) (positive BC and negative urine cultures), results that are comparable to those seen by Etienne et al. More important, 3 of the microorganisms isolated from BC that contributed to the diagnosis (2 Escherichia coli isolates and 1 Enterococcus faecalis isolate) were resistant to quinolones and 1 (Morganella morganii) was, in addition, resistant to cefuroxime and to amoxicillin-clavulanic acid. As the degrees of antimicrobial resistance in the cases in which BC contributed to microbiological diagnosis were not reported by Etienne et al., we wonder if this was also the case. A positive answer would give additional arguments for the recommendation of drawing blood cultures from patients with AP.

Regarding the prognostic value of BC, as pointed by Etienne et al., the greater duration of fever in patients with AP and positive BC could reflect the existence of a more severe disease, although the retrospective nature of the analysis limits their conclusions. The measurement of hemodynamic parameters, for instance, mean arterial pressure, could give additional information about the clinical situations of these patients and whether the existence of positive BC is a potential marker of the severity of the infectious episode.

REFERENCES


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Author’s Reply

We are very pleased to be given the opportunity to reply to the comments made by Smithson et al. regarding our article “Should blood cultures be performed for patients with acute bacterial prostatitis?,” published in the May 2010 issue of the Journal of Clinical Microbiology.

Their first comment raises the issue of the diagnostic criteria for acute prostatitis. We totally agree that the involvement of the prostate during male febrile urinary tract infection (UTI), though common, might be inconstant. However, to date, there is no routine investigation that would confirm that the prostate is free of infection. Moreover, UTI in men is associated with high rates of treatment failure and with persistent symptoms, such as chronic prostatitis/chronic pelvic pain syndrome (2, 3). Hence, the French guidelines recommend that all UTIs in males should be treated as prostatitis (1). Second, the results observed by Smithson and al. are in complete agreement with our conclusions regarding the percentages of positive and contributive blood cultures. In our series, the pathogens isolated in contributive blood cultures (BC) exhibited high rates of intermediate susceptibility or resistance to amoxicillin for 11/14 (79%) patients, to amoxicillin-clavulanate for 10/14 (71%) patients, to cefotaxime for 3/14 (21%) patients, and to ciprofloxacin for 5/14 (36%) patients. For 3/14 (21%) patients, the pathogen isolated in BC was resistant to the probabilistic antibiotic treatment (ofloxacin for 1, ciprofloxacin for 1, and cefotaxime for 1 patient), and the treatment regimen was modified after the BC results were obtained. Although these results provide additional arguments for the recommendation of drawing BC, we did not report these results, due to the low number of patients. Lastly, we agree that the intensities of
sepsis and positive BC might be confounding variables, both related to the prognosis of UTI in males. As suggested by Smithson et al., a prospective series, collecting the hemodynamic parameters at admission, and perhaps the inflammatory parameters as well, would help in determining better prognostic factors. Unfortunately, these parameters were not collected in our database. In conclusion, the BC withdrawn for untreated febrile patients appear to be useful primarily for microbiological diagnosis of UTI in males, either to identify the causative pathogens or to specify their susceptibility profile.

REFERENCES


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