Correspondence

Heparin-Binding Protein: A Potential Biomarker in Sepsis?

[Q1]To the Editor—We read with great interest the study conducted by Linder et al [1] that presented heparin-binding protein as an early marker of circulatory failure in sepsis [Q2]. Linder and colleagues reported impressive sensitivity and specificity for this novel marker in predicting severe sepsis, with or without septic shock. Some major issues should be brought up more clearly to the reader. The study consisted of 233 febrile adult patients. According to the authors, 170 of these patients had cases that fulfilled the widely used criteria of sepsis [2], 44 patients had cases that met the criteria for severe sepsis, and 26 patients had cases that met the criteria for septic shock. However, only 7 (4%) of 170 patients with sepsis died, and the case-fatality rates for severe sepsis without or with septic shock were 4.5% and 19%, respectively. It is noteworthy that only 58% of patients with septic shock were treated in an intensive care unit with vasopressor agents. The reported case-fatality rates for severe sepsis in this nonpopulation-based study [1] are in contrast with most previous studies reporting case-fatality rates of 25%–30% for severe sepsis and up to 40%–70% for septic shock [3–5]. The authors stated that the study was large and involved a broad range of clinical presentations and diagnoses. However, some caution in the interpretation of results should be considered because of the small number of deceased patients (n = 7) in this study. It seems that the most severe cases of sepsis were largely lacking. We missed the presentation of the clinical data (eg, SOFA scores and mean arterial pressures) and the host’s underlying conditions stratified by the different diagnoses to assess the real differences between the groups of patients with distinct diagnoses.

Our main concern is that the present study, like many others using “the official” sepsis definition [6], is prone to bias as a result of the nonspecificity of [Q4]SIRS criteria in differentiating infections from noninfectious causes of inflammation [6]. In the present study, blood culture results were positive for 29 (41%) of 70 patients with severe sepsis, and for 24 (34%) of 70 patients with severe sepsis, there was no culture-proven etiology [1]. These results are in line with other studies using SIRS criteria, in which a definite microbiological diagnosis cannot be made in one-third or more of patients with clinical manifestations of sepsis [7, 8].

In the future, it would be interesting to see the prognostic value of heparin-binding protein in population-based studies involving patients with culture-proven bacteremic infections.

Acknowledgments

Potential conflicts of interest. R.H. and J.S.: no conflicts.

Reetta Huttunen and Jaana Syrjänen
Department of Internal Medicine, Tampere University Hospital, University of Tampere Medical School, Tampere, Finland

References

Reprints or correspondence: Dr Reetta Huttunen, Dept of Internal Medicine, Tampere University Hospital, PL 2000, FIN-33521 Tampere, Finland (Reetta.Huttunen@uta.fi).

Clinical Infectious Diseases 2010;50:000–000
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