larger amount of data would be required, however, which could only be obtained through multicenter trials. The framework that would be most suitable for such studies would be either the International Collaboration on Endocarditis [7] or national endocarditis registries, such as the Swedish national endocarditis registry.

The incidence of CVCs in our study is high, but this finding should be considered in the context of the prospective study design, which focused on the neurological manifestations of IE, and the sensitive diagnostic methods used. Asymptomatic CVCs have been documented in other studies [5] by use of cerebral CT, and this supports the theory that diagnostic efforts initiated as a result of neurological symptoms in IE reveal only the tip of the iceberg regarding the incidence of CVC in IE. It is our opinion that the incidence of CVC in IE is related to study population characteristics, as well as to the study design and the diagnostic methods used.

Potential conflicts of interest. All authors: no conflicts.

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References


A Powerful New Severity Score for Community-Acquired Pneumonia But Will Anyone Use It?

To the Editor—We read with interest the article by Charles et al. [1] that described the use of a new score for predicting the need for invasive ventilation or vasopressor support in patients with community-acquired pneumonia. Although accurate, the score is limited by its complexity. Because the scoring system is composed of 8 clinical and laboratory factors with different cutoff values for different age groups and different points awarded for each factor, we are concerned that it will be difficult to implement in a busy emergency department.

The pneumonia severity index was never accepted in the United Kingdom because of its complexity, and the main reason that the CURB-65 score has succeeded the pneumonia severity index in many national guidelines is its simplicity. Even accounting for this advantage, the evidence suggests that a minority of junior doctors can remember the CURB-65 criteria when asked [2] and that only a minority of patients receive severity assessment at hospital admission in the United Kingdom [3]. Investigators are increasingly recognizing the importance of simplicity, which explains why more recent scoring systems have been composed of a minimal number of clinical parameters [4] and why there has been such interest in simple biomarkers, such as procalcitonin, C-reactive protein, and D-dimer levels [5–7].

It is critical to develop a severity assessment tool that can predict the need for invasive respiratory support or vasopressor support, but it is equally critical to develop a scoring system that will actually be used in clinical practice. Future studies should aim to expand on this work to develop a simple score that can predict requirement for invasive ventilation and/or inotropic support.

Acknowledgments


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References

Reply to Chalmers and Hill

To the Editor—We thank Chalmers and Hill [1] for their comments. Although we agree that simplicity is certainly desirable for pneumonia severity assessment tools, this is not necessarily practical. Patients who require intensive respiratory or vasopressor support have a variety of indications for receiving such care. In the patient databases used in our study [2], simpler severity assessment tools, such as CURB-65 (or variations of it, such as CRB-65, CURB, or CRB), resulted in either high sensitivity or high specificity but not both. Thus, these simple tools will, depending on the chosen cutoff score, identify too many patients as having severe pneumonia or, alternatively, identify only a minority of patients with severe disease. Because neither of these options is clinically useful, we developed our slightly more complex tool to achieve a better balance of sensitivity and specificity.

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Use of a Serum (1–3)-β-d-Glucan Assay for Diagnosis and Follow-Up of Pneumocystis jiroveci Pneumonia

To the Editor—We read with great interest the letter by Pisculli and Sax [1] about the diagnostic usefulness of the (1–3)-β-d-glucan (BG) assay for the diagnosis of HIV-related Pneumocystis jiroveci pneumonia (PJP) in 3 patients with negative results of microscopic examination of respiratory samples. Here, we report the prospective observation of BG reactivity (Fungitell; Associates of Cape Cod) in serum samples from 3 HIV-infected patients with positive results of immunofluorescence tests of respiratory secretions and 2 immunocompromised patients with negative results of immunofluorescence and positive results of real-time PCR of bronchoalveolar lavage specimens (table 1) [2].

Accurate and rapid diagnosis of PJP may be difficult, because of nonspecific symptoms and signs and because it requires positive microscopic examination of respiratory secretion samples. However, negative results of microscopy of respiratory secretions do not exclude the diagnosis of PJP, because the sensitivity is variable and, in many instances, is <50%. PCR has been shown to have greater sensitivity and specificity in evaluating induced sputum and bronchoalveolar lavage fluid specimens, but the interpretation of results may be conflicting, because asymptomatic P. jiroveci carriage is possible, in both immunocompetent and immunocompromised individuals [3].

There are a number of commercially available methods for the detection of BG through use of different methodologies, cut-off values, and sensitivity. The chromogenic BG test (Fungitell) has been approved by the US Food and Drug Administration as an adjunct for the diagnosis of invasive fungal disease, although the initial validation of BG testing in United States did not include patients with PJP [4].

Currently, the information about the diagnostic potential of the Fungitell BG test for the diagnosis of PJP is scarce; to our knowledge, there have been only 2 published reports [1, 5] and a poster presented at a scientific meeting [6]. The kinetics of BG release from the infected sites and of circulation of BG in blood, as well as clearance of BG, are poorly understood. The kinetics shown relative to patients 1 and 4 (table 1) suggest that decreasing levels of BG correspond with a favorable response to treatment, whereas increasing levels are associated with treatment failure (as for patient 3). The conditions of patients 2 and 5 deteriorated rapidly, and no serum samples were obtained for follow-up. Decreasing BG values after treatment with trimethoprim-sulfamethoxazole have also been described in several patients with confirmed PJP [5, 6]. These preliminary results suggest that monitoring BG antigenemia would also be a valuable tool in predicting therapeutic outcome in patients with PJP, although more clinical and mycological experience is warranted.

It is important to stress that none of our patients had received PJP prophylaxis, for various reasons: (1) because PJP led to the diagnosis of HIV infection, (2) because of noncompliance with HIV treatment, and (3) because of known patient allergy to trimethoprim-sulfamethoxazole.

We concur with Pisculli and Sax [1] that the BG assay is a noninvasive serological marker that can be used as an adjunct for the diagnosis of PJP, particularly in patients with severe disease, profound thrombocytopenia, or pulmonary condition so poor that the use of fiberoptic bronchoscopy with bronchoalveolar lavage specimens is often precluded because of the trauma that may be caused by the procedure.

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