Severe Sepsis Due to Melioidosis

To the Editor:

We would like to comment on the retrospective review of melioidosis by Chan et al in a recent issue of CHEST (November 2005).1 We commend the authors on their work, which reinforces the high mortality rate associated with this infection, particularly in those patients with a critical illness.

Contrary to their assertion that melioidosis in the ICU setting has not previously been described, we have previously published2 our experience of 42 critically unwell patients with culture-confirmed melioidosis. In our series, we noted a fall in the mortality rate from 95% to 9.5% coincident with the introduction of granulocyte colony-stimulating factor (G-CSF) in patients with septic shock. We also acknowledged that the large fall in the mortality rate that we observed may have been at least partly explained by other potential confounders, including the adoption of a closed intensive care model, the earlier use of antibiotics active against Burkholderia pseudomallei, and more aggressive fluid resuscitation. We have also demonstrated that pneumonia and biochemical markers of organ dysfunction are generally associated with mortality in patients with melioidosis.

Studies of melioidosis have been difficult to compare due to the large clinical spectrum of illness and variations in the definitions of “severe melioidosis.” This is reflected in the differences in the rates of bacteremia between studies. However, severe sepsis (as defined by Chan et al1) and septic shock (as defined in our series) represent the group with the highest mortality rate due to melioidosis. The mortality rate that we observed in patients who received G-CSF in our series was lower than that observed by Chan et al in patients with similar severity of illness. Chan et al did not differentiate pneumonia with septic shock from pneumonia without septic shock; the Darwin experience suggests that pneumonia with septic shock is associated with an 84% mortality rate.4

We suggest that the measures associated with the fall in mortality at our institution, namely, the use of G-CSF, the routine use of empiric antibiotics for melioidosis, and the use of aggressive fluid resuscitation, should be considered for patients with severe sepsis in melioidosis-endemic areas. We have participated in studies aimed at identifying patients with melioidosis by the use of clinical criteria and rapid diagnostics,5 and we are in the process of conducting a clinical trial of G-CSF for the treatment of severe melioidosis in Thailand.

REFERENCES

Left Ventricular Diastolic Abnormalities in Obese Subjects

To the Editor:

The study by El-Gamal et al (December 2005)1 presented evidence of an association between the degree of dyspnea and both an increased ventilatory drive and reduced static lung volumes. Indeed, weight loss was accompanied by improvement in dyspnea and a reduction in respiratory drive measurements. We would like to comment on one other possible mechanism that was not addressed by the authors explaining the frequent presence of dyspnea in obese patients and the improvement in the degree of such symptoms after weight loss. Left ventricular diastolic dysfunction is a frequent cause of dyspnea. It is commonly present in obese subjects and is correlated with increasing body mass index.2 In obese subjects, weight loss produces an improvement in left ventricular diastolic function that is linked to weight loss-related decreases in left ventricular mass and beneficial alterations in left ventricular loading conditions.3 On the other hand, the authors did not perform polysomnography to rule out obstructive sleep apnea or other sleep disorders, as they acknowledge in the “Discussion” section of their article. It is well-recognized that the vast majority of sleep apnea patients are undiagnosed, and that obstructive sleep apnea is a very common condition affecting obese subjects. This sleep-related disordered breathing has also been independently associated with left ventricular diastolic dysfunction and reduced cardiac response to exercise.4 Weight loss in obese obstructive sleep apnea patients is coupled with an improvement in sleep disorder severity, and the reduction of apneic events has also been associated with subse-