venous-catheter use during hospitalization was comparable to that in a multicenter study conducted by the Centers for Disease Control and Prevention (CDC) in HIV-infected patients at five Veterans Affairs Medical Centers [5]. Device-utilization ratios (total device days per total patient days) among HIV-infected patients were highest for peripheral venous catheters (device utilization ratio, 0.65) followed by central venous catheters (0.13), urinary catheters (0.03), and ventilators (0.03).

We agree with Alfandari et al. that device-adjusted NI rates would have been useful in our report. However, given the small number of cases, such an analysis would not have led to statistically significant results. Comparing NI rates among hospitals is difficult because of potential differences in surveillance intensity and diagnostic testing as well as differences in the intrinsic infection risks among patients in different hospitals. In addition, the unusual feature of NIs at the San Francisco General Hospital could be due to the facility’s function as a regional trauma center.

Uwe Frank and Franz D. Daschner
Institute for Environmental Medicine and Hospital Epidemiology, University Hospital Freiburg, Freiburg, Germany

References

Utility of the Enzyme-Linked Immunosorbent Assay for Diagnosing Neurobrucellosis

Sir—Patients with neurological complications of brucellosis often have CSF agglutinin titers that are lower than the concomitant serum levels; however, CSF agglutinins are rarely absent [1]. In one series, CSF agglutinins were found in four of the five cases in which they were sought [2]. In the fifth case, agglutinins were also absent in the patient’s serum, raising questions about the diagnosis. In a series of nine cases of neurobrucellosis in children, CSF agglutinins were detected in all of the patients [3]. In a review of brucella meningitis, 22 of 24 patients had CSF agglutinins, and the two patients without CSF agglutinins also did not have serum antibodies to Brucella [4]. In some reports, CSF agglutinins were not sought [5], or “negative” was defined as titers of <10 [6], <40 [7], or <80 [8]. It is not clear why the authors of these reports chose arbitrary end-point dilutions as indicators of negativity, nor is it clear whether lower dilutions of CSF were tested.

It is assumed that as long as the integrity of the blood-brain barrier is intact, antibodies do not passively diffuse into the CSF, regardless of the level of antibodies in serum. In cases of neurobrucellosis, intrathecal synthesis of antibodies is suggested by the finding of oligoclonal gamma globulin [9]. Consequently, the detection of any titer of antibodies in CSF is prima facie evidence of neurobrucellosis.

We agree with Araj [10] that the ELISA is a sensitive method for the diagnosis of brucellosis, and it can be a useful adjunct when agglutination results are equivocal or truly negative. However, the antigens used for this ELISA have not been standardized, making interlaboratory results difficult to interpret. Moreover, the ELISA is not as widely available throughout the world as are agglutination tests; thus it remains to be determined whether the ELISA should replace the agglutination assay for the diagnosis of brucellosis.

Edward J. Young
Section of Infectious Diseases, Veterans Affairs Medical Center, Houston, Texas

References