

anti-E2 (1%) in blood donors accepted at the Tabriz blood transfusion center”.

In reply to the second point, the reference ranges of ALT and AST are cited in referral clinical laboratory texts<sup>6,7</sup> and are available to all scholars.

*Conflict of interest:* No conflict of interest to declare.

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## Splenic puncture: diagnostic accuracy and safety in infectious diseases

To our knowledge, Widal, late in the 19th century, was the first to puncture the spleen for the diagnosis of typhoid fever. Since then, splenic aspiration has been widely used around the Mediterranean Basin and in Asia in the diagnosis of leishmaniasis, trypanosomiasis, and malaria. We present herein a brief review of the use of this technique with regard to its utility and safety in the diagnosis of infectious diseases, and share our experiences of its use in the diagnosis of brucellosis.

Cysts, abscesses,<sup>1</sup> and a variety of infectious and granulomatous processes<sup>2</sup> involving the spleen can be diagnosed by puncture. Although various complications of this technique, including pneumothorax, left shoulder pain, and hemoptysis, have been reported, uncontrolled bleeding resulting in death or requiring a splenectomy is rare.<sup>3</sup> In over 1000 aspirations, Soderstrom<sup>4</sup> experienced no complications. Kumar et al.,<sup>5</sup> in their study of 48 cases, concluded that splenic aspiration is a safe and very useful procedure in the diagnosis of parasitic and infectious diseases. The experiences of Lal et al.<sup>6</sup> and Venkataramu et al.<sup>7</sup> have also demonstrated the excellent diagnostic accuracy and safety of splenic aspiration in both neoplastic and infectious splenic disorders. In the latter study, acid-fast bacilli were demonstrated in 10 patients, aspergillus in one, and one was diagnosed as having histoplasmosis.<sup>7</sup>

The diagnostic yield has been found to be higher for splenic aspiration than for other specimens in visceral leishmaniasis (as high as 98% vs. <90%, respectively).<sup>8</sup> Recently, splenic aspiration has been used for the diagnosis of splenic

abscess as a complication of enteric fever by isolating *Salmonella typhi* in a patient whose cultures of blood, urine, and stool were sterile.<sup>9</sup> Also, the recent use of computed tomography (CT)-guided percutaneous aspiration for the diagnosis of splenic abscess has shown encouraging results.<sup>10</sup>

To-date, no attempts have been made to puncture the spleen in a living subject for the diagnosis of brucellosis. Hence, we conducted a comparative evaluation of blood, bone marrow, splenic (ultrasound-guided), liver, and lymph node aspirate cultures in 13 patients who were seropositive for brucellosis (standard tube agglutination test  $\geq 1:160$ ), and who had clinical features suggestive of brucellosis along with an epidemiological indication. The specimens were cultured simultaneously using Castaneda's biphasic media consisting of brain heart infusion agar and broth or trypticase soy agar and broth, and were processed according to standard methods.<sup>11</sup> It was found that bone marrow specimens were sterile in 46% (6/13) of cases when bacteremia was present, but *Brucella melitensis* was detected in the splenic aspirate in these six bacteremic cases. In one patient for whom the blood was sterile, the splenic aspirate yielded *B. melitensis*. These results indicate that the brucellae are not uniformly distributed in the bone marrow and also that adopting the practice of culturing splenic aspirates may enhance bacterial isolation and aid in the establishment of the diagnosis of brucellosis. No evidence of morbidity, such as hemorrhage, was encountered.

To make this technique safe, it is wise initially to confine the performance of the procedure to a few hands until they become more familiar with it. In our experience, with a small bore needle, splenic aspiration is safe and can be a

useful extension to the diagnostic tests for infectious diseases, especially in developing countries where advanced technologies like automated culture systems with PCR are unavailable.

*Conflict of interest:* No conflict of interest to declare.

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## Correct terminology for electrodiagnostic studies

Dear Editor

I recently read an article in your journal entitled "Evaluation of the clinical presentations in neurobrucellosis" (Yetkin MA, Bulut C, Erdinc FS, Oral B, Tulek N. *Int J Infect Dis* 2006;10:446–52). Since neurological involvement is infrequent in brucellosis, this interesting analysis of 20 cases provides substantial insight into this significant clinical problem.

A point of terminology must have escaped the attention of the co-authors as well as the journal's reviewers. Electrodiagnostic studies utilized in patients for the diagnosis of peripheral neuropathy and radiculopathy were repeatedly termed *electromyography* instead of *electromyology* in the methods, results, and discussion sections. Although the term is widely used among some physicians, it is not included in

the medical subject heading (MeSH) vocabulary list, thus does not exist as a keyword in PubMed.

I believe that the term *electromyography* should be the preferred one for terminology consistency in medical journals.

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