Concern regarding the differential diagnosis of leishmaniasis

To the Editor

We comment on the problems faced by Niscola et al1 during a specific diagnosis of leishmaniasis in patients with hematological malignancies. Rather than a serological test like direct agglutination and anti-K39 antibody, an in-vitro culture, and/or polymerase chain reaction (PCR) might be required to establish leishmaniasis diagnosis in those with a concurrent HIV infection. Serology would generally be expected to be negative or borderline due to the frequent occurrence of humoral immunity imbalances.2 Recently, just one of the 79 confirmed HIV/AIDS cases in Ankara was serologically positive for leishmania during their fast agglutination screening or direct agglutination test or indirect immunofluorescent antibody test.3 The bone marrow aspirates and trephine biopsies from similar enigmatic cases would merit their culture for demonstration of leishmania employing a biphasic medium using Novy-MacNeal-Nicolle (NNN) medium and defibrinated rabbit blood. Recently, promastigotes were seen during cultivation of skin aspirates of in 53 of 76 patients with cutaneous leishmaniasis (CL) in Brazil.4 Last but not least, suitability of quantitative nucleic acid sequence-based amplification (QT-NASBA), quantitative real-time reverse transcriptase PCR (qRT-PCR), and quantitative real-time PCR (qPCR) for a leishmania diagnosis with patient samples has been encouraging;5 an obvious option towards leishmania diagnosis in hematological disorders.

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Reply from the Author

The comment of Dr. Arya and Dr. Agarwal on our paper1 address some important issues and raise some important concerns regarding the diagnosis of leishmaniasis in patients with hematological features resembling a malignant blood disease and a concurrent HIV infection. We completely agree with the observation expressed by our colleagues; indeed, in the setting of HIV infection, which may present with some hematological features resembling some blood-related neoplasm,6 the diagnosis of leishmaniasis should rely on an in-vitro culture and/or PCR rather than a serological test like direct agglutination and anti-K39 antibody, for which the diagnostic value is limited by the decreased antibody production observed in most patients.7 However, in the setting of HIV-negative and immunocompetent patients, serological tests can be an optimal and reliable tool; moreover, we described the hyperimmune humoral response, expressed by an important polyclonal hypergammaglobulinemia presented by our patients. In addition, bone marrow trephine biopsies allowed for a morphologic diagnosis that was then confirmed by serological tests in 3 (50%) out 6 cases; in the remaining cases, the diagnosis was achieved by serological tests, after that a hematological malignancy and other possibly related underlying disorders were excluded by careful evaluation.

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References