

## Appropriate Screening for Leishmaniasis before Immunosuppressive Treatments

**To the Editor:** We read with great interest the article by Xynos et al. reporting 2 cases of leishmaniasis in patients treated with biologic drugs (1). Although we agree with most of the article, we are not totally convinced that serologic analysis alone could be used to screen for leishmaniasis before initiation of biologic or immunosuppressive treatments. Evidence indicates that serologic analysis can identify only symptomatic or asymptomatic cases with recent and still active infection (2,3).

*Leishmania* spp. are pathogens that infect hematopoietic cells, where they establish chronic intracellular parasitism and survive for an infected person's lifetime. In leishmaniasis-endemic countries, asymptomatic visceral leishmaniasis (VL) infections occur more frequently than clinically apparent VL cases. An estimated 10%–20% of persons with asymptomatic infections develop clinically overt VL (4). The leishmanin skin test (LST) (Montenegro test), an intradermal injection of a suspension of killed promastigotes, measures delayed hypersensitivity reactions and appears to be the only screening test capable of detecting asymptomatic leishmania infections.

A positive LST result is thought to indicate durable cell-mediated immunity after asymptomatic infection or clinical cure of VL. LST positivity may appear months to years postinfection, but once positivity appears, it persists in immunocompetent patients. A survey of VL in Ethiopia showed LST positivity in 32.2% of the population, but leishmania antibodies were found in only 4.1% (5).

Because different antigen preparations may affect test sensitivity, LST should use promastigotes of the *Leishmania* spp. present in an area. We believe that ideal screening for leishmaniasis should include LST along with serologic analysis. Unfortunately, little data exist on the use of antileishmania therapies for LST-positive or serologically positive patients. VL with unusual signs and symptoms may develop in immunocompromised patients with previous LST positivity after immunosuppressive treatments. Information about LST positivity is useful for calling attention to this potential risk for VL that may have unusual manifestations in these persons.

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**In Response:** In their letter responding to our recently published article (1) Cascio and Iaria spark an important discussion on the usefulness of screening for *Leishmania* infection before administering biologic agents or other immunosuppressive treatments to patients having autoimmune rheumatic diseases and living in areas where *Leishmania* parasites are endemic (2). Although we agree in principle that early detection of asymptomatic *Leishmania* infection will decrease the incidence of the disease in immunosuppressed patients, current diagnostic tools may have a limited (or restricted) role in detecting *Leishmania* infection in this vulnerable patient population. Screening for leishmaniasis has been hampered by the lack of a standard test. Currently available serologic methods have variable sensitivities, specificities, and cross-reactivities, depending on the species being tested and the region where tests are performed. Many experts believe that serologic tests may complement other existing diagnostic tools, raising cost-efficiency concerns, especially in financially deprived countries (3).

A positive leishmanin skin test (LST) result indicates exposure to *Leishmania* spp. and is generally thought to reflect a durable cell-mediated immune response. No cross-reaction occurs in patients with Chagas disease, but some cross-reactions are found in patients with glandular tuberculosis or lepromatous leprosy (4). Sustained positive responses have been documented for up to 20 years after exposure to the *Leishmania* parasite. Nevertheless, LST has

limitations. In a longitudinal study of visceral leishmaniasis in Bangladesh, Bern et al. reported loss of LST sensitivity attributed to antigen-production issues, such as standardization and documentation of sensitivity, potency, and stability of leishmanin antigens (5). Also, prior treatment with immunosuppressive agents, which influence cell-mediated immunity, may decrease LST prognostic potency similarly to changes observed for the tuberculin skin test in similar settings (6).

Variations in specificities and sensitivities limit the diagnostic potential of available diagnostic tools. The context of immunosuppression further contributes to the diagnostic complications and increases the need for additional research in leishmaniasis diagnostics.

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#### ANOTHER DIMENSION

### Red Snappers

Erin E. McConnell

for a moment pretend  
you are not  
the infallible house staff,  
but the latest admission—  
hacking putrid sputum  
from your soulful depths  
or your festering chest,  
depending on your mood.

slapped with a mask,  
you are secured in secluded rooms;  
a paucity of guests,  
but for the parade of absurd birds—  
plastered in Haz-mat  
lemon-yellow gowns,  
and peach-colored beaks.  
your meager dried-up sleep  
is aborted by  
bloodhungry fowl  
covetous of mucus  
you no longer produce.

your meals grow cold  
waiting for you  
in the anteroom of  
your negative pressure purgatory.

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