LIVER–SPLEEN SCINTISCAN IN KALA-AZAR: CASE REPORT

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Massive splenomegaly was found in a liver–spleen scan in a young man from Greece. Kala-azar was suggested as a possible cause and was confirmed by culturing Leishmania donovani from the bone marrow aspirate. The differential diagnosis of massive splenomegaly should include kala-azar when a patient has been in an endemic area.

The diagnosis of kala-azar, or visceral leishmaniasis, has rarely been made in the United States (*1*). Although the clinical and pathologic manifestations are well documented, there has been no previous report of liver–spleen scintiscanning in this disease.

CASE REPORT

A 25-year-old man was referred for evaluation of fever, night sweats, epigastric pain, and a 20-lb weight loss over the 10 weeks prior to admission. The admission diagnosis was malignant lymphoma. During the previous year, he had lived in the suburbs of Athens, Greece, and had enjoyed excellent health.

Physical examination revealed a chronically ill appearing young adult with an oral temperature of 100.5°F. By percussion his liver had a span of 11 cm and his spleen was palpable 11 cm below the left costal margin. There were no skin lesions and no lymphadenopathy.

Laboratory investigation showed a hematocrit of 31.5 vol%, hemoglobin of 10.8 gm/dl, a leukocyte count of 3,400/mm^3, and a sedimentation rate of 40 mm/hr. The bilirubin was 1.2 mg/dl, the alkaline phosphatase was 56 IU, and the total protein was 8.6 gm/dl with albumin of 3.8 gm/dl and gamma globulin of 3.2 gm/dl.

During hospitalization, the patient remained afebrile but complained of fatigue. Chest x-ray and excretory urogram were normal. A liver–spleen scan performed with ^{99m}Tc-sulfur colloid showed massive

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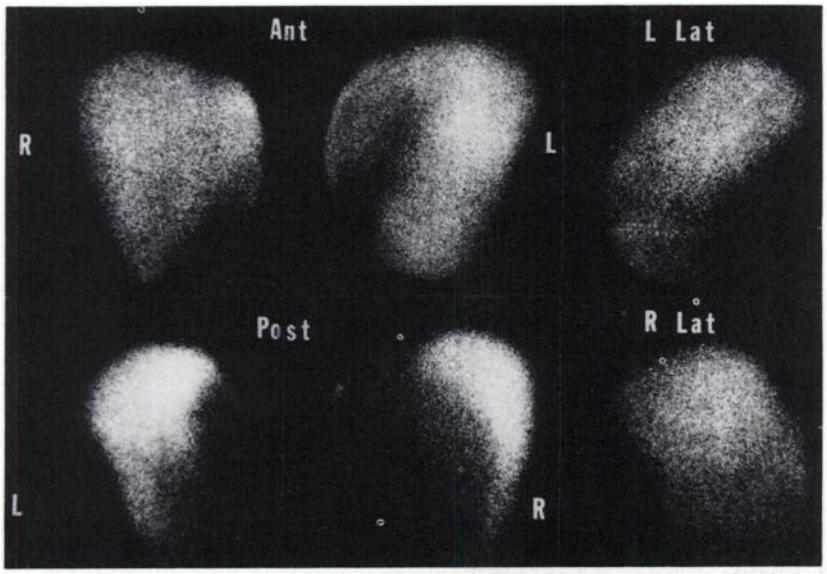

FIG. 1. Technetium-99m-sulfur colloid liver–spleen scan in 25-year-old man with kala-azar shows normal liver and massive splenomegaly.

splenomegaly measuring 25 cm on the posterior image with homogeneous distribution of the radiopharmaceutical throughout the normal-sized liver and large spleen (Fig. 1). A ^{67}Ga scan also showed the large spleen, which contained less radiopharmaceutical than the liver.

A liver biopsy showed nonspecific round-cell infiltration of the portal areas, and a bone marrow aspiration/biopsy showed hypercellularity with multiple small noncaseating granulomas. Acid-fast, fungal, and Giemsa stains were negative. After 11 days in NNN medium, bone marrow cultures grew flagellated leptomonad (promastigote) forms of Leishmania donovani.

DISCUSSION

Kala-azar is a chronic parasitic disease endemic in many countries, including those bordering the Mediterranean (*2,3*). The parasite L. donovani is transmitted to man by the bite of Phlebotomus sandflies. L. donovani involves the reticuloendothelial system and massive splenomegaly is a universal finding. If untreated, the disease causes death in 1–3 years from hemorrhage or infection.

Massive splenomegaly [spleen greater than 1,000 gm or 20 cm on posterior scan image (*4*)] without alteration in hepatic function may be seen in lymphoma, chronic leukemia, Gaucher's disease, amyloidosis, myeloid metaplasia, schistosomiasis, and the "tropical" and "congestive" splenomegalies, as well as in kala-azar.

The enormous increase in travel abroad by Americans has resulted in the importation of diseases rarely before seen in the United States. Like kala-azar, many of those diseases are treatable and potentially curable if the appropriate diagnosis is established. This case emphasizes the importance of a travel history in diagnostic problem cases.

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