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CASE REPORT

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An HIV + patient with visceral enlarged lymph nodes

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ABSTRACT
An HIV positive patient with enlarged visceral lymph nodes was diagnosed to be affected by visceral leishmaniasis. Transesophageal endoscopic ultrasound with fine needle aspiration, a diagnostic approach used when mediastinal or intra-abdominal lymphadenopathy is evident, was the first diagnostic test.

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KEYWORDS
HIV; enlarged visceral lymphnodes; leishmaniasis

Case presentation

A 50 years-old male born in Morocco was admitted to the Hospital for detection of visceral PET positive lymph nodes. He was a former smoker (quit 5 years before admission; 31 pack years) and his occupation was working with plastic. He had been treated for his HIV infection for 5 years. Recently, he had been submitted to surgery and radiotherapy for rectal cancer. He had antibodies against surface Hepatitis B virus and was therefore also treated with Tenofovir, Lamivudine and Efavirenz.

Radiographic and Nuclear Investigations were previously carried out for a low-grade fever of unknown origin. Physical examination documented hepatosplenomegaly and enlarged lymph nodes in the inguinal area.

Altered routine blood tests results are reported in Table 1. Computed tomography scan of the thorax and abdomen mainly showed disseminated enlarged lymph nodes (mediastinum, abdomen) and an enlarged liver and spleen with splenic and portal veins showing enlarged diameters. (Figure 1)

Clinical reasoning

The clinical reasoning was based on three pillars: 1; clinical profile characterized by low grade fever in an HIV patient already under retroviral treatment, 2; laboratory findings characterized by moderate white cells cytopenia (2.45 x 10^9/L), hypergammaglobulinemia (38.7%), an increase of erythrosedimentation rate (85 mm/h) and a mild increase of beta2-microglobulinemia (5.5 mg/L) and 3; imaging features, mainly represented by enlarged visceral PET positive lymph nodes. Therefore, the most probable diagnosis is included in the following differential diagnosis list: lymphoproliferative disorders, infections (fungal or parasite infections) and metastatic epithelial tumors. PET positive reachable lymph nodes are mainly sited in the mediastinum. Because the lymphoproliferative disorders in HIV positive patients are usually of the large B cell subtypes and a diagnosis is possible using cytological material and infections manifesting with visceral enlarged lymph nodes are more frequently due to intracellular microscopically or microbiologically easy to identify agents (i.e. *Cryptococcus, mycobacteria*) and because inguinal lymph nodes are frequently not specifically inflamed, a transesophageal ultrasound (EUS) approach was scheduled with fine needle aspiration biopsy (FNAB, 22 G needle) of lymph nodes in station 4L.

Smears and cell block preps stained by May Grunwald Giemsa, Papanicolaou, Hematoxylin-Eosin and Giemsa were analyzed. Histiocytes laden by amastigotes were identified; amastigotes were also found outside the cells (Figure 2). Amastigotes is one of the transformation stages (the intracellular phase) of the Leishmania parasites life cycle. It is the form the Leishmania parasite takes in the vertebrate host and it is diagnostic when found. A final diagnosis of Lehismaniasis was therefore done. A molecular test on peripheral blood confirmed the morphologic diagnosis. *Leishmania donovani* DNA copies

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Table 1. Altered Laboratory tests.

White Blood Cells	2.45x 10^9/L
Red Blood Cells	3.83 x 10^9/L
Hemoglobin	10.7x g/dL
Platelets	103 x 10^9/L
Lymphocytes	0.69 x 10^9/L
Total CD4+ lymphocytes	143/ml
Gamma globulins	38.7%
IgA	6.41 g/L
IgG	33.33 g/L
IgM	6.39 g/L
Beta2-microglobulinemia	5.5 mg/L
ESR	85

were present (1,700 genome copies/mL). Other microbiological investigations (bacteria, mycobacteria, fungi, *cytomegalovirus, herpes simplex* type I and II viruses) were negative. The patient was treated with liposomal amphotericin B (3 mg/kg iv for 5 days).

Discussion

The term Leishmaniasis encompasses multiple clinical syndromes due to obligate intracellular protozoa characterized by vast diversity and by specificity within that diversity [1, 2]. Leishmania parasites are transmitted by the bite of female phlebotomine sand flies. Dogs are an important reservoir. The multitudinous possible combination of Leishmania species/strains and geographic areas modified by host factors and immunoinflammatory responses may explain the relevant differences in clinical manifestations and response to particular therapies. Clinical syndromes are grouped into three categories: cutaneous, muco-cutaneous and visceral form, the last one being the most severe. HIV positive patients are prone to develop more severe visceral manifestations and typically experience more drug related toxicity. Antiretroviral therapy delays but do not prevent relapses [2]. EUS-FNAB is mainly used for getting tissue for histologic evaluation when mediastinal and/or intra-abdominal lymphadenopathy are evident, especially when there are no other lesions available. It is well established in diagnosing and staging lung cancer. The case herewith presented confirms the diagnostic utility of EUS with fine needle aspiration even in non-neoplastic disorders mainly manifesting with mediastinal lymph nodes enlargement [3].

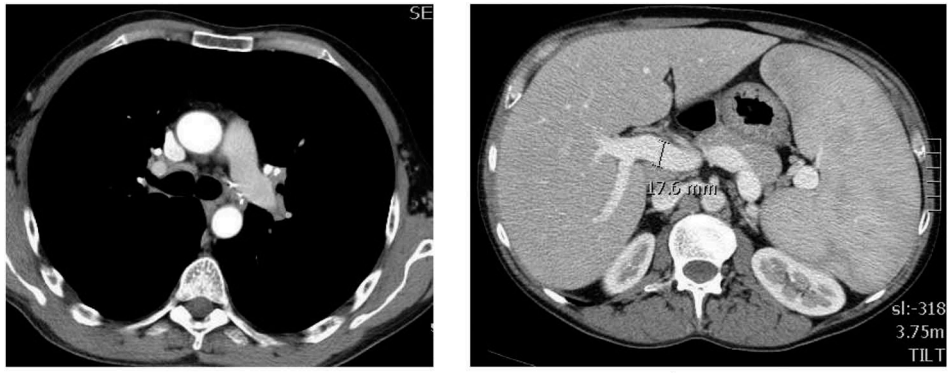

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Figure 1. (a). CT scan of the thorax with contrast. Enlarged lymph nodes in station 4R and 4 L. (b). CT scan of the abdomen with contrast. Enlarged spleen and liver and a dilated portal vein are evident.

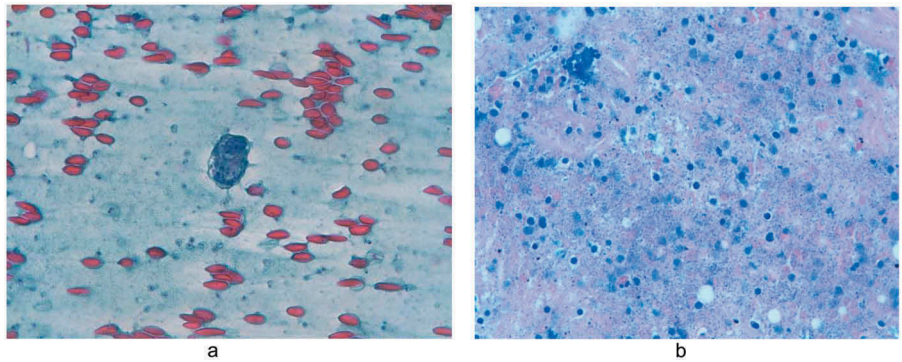

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Figure 2. (a) An histiocyte containing amastigotes Papanicolaou, medium power. (b) Cell block preparation: a lot of amastigotes in the cytoplasm of histiocytes and free outside cells. Giemsa, low power.

Disclosure statement

No potential conflict of interest was reported by the authors.

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