SUMMARY

Visceral leishmaniasis (VL), also known as kala-azar (black fever in Hindi), is a disease primarily caused by *Leishmania donovani*. The most important clinical manifestation of visceral leishmaniasis is fever. Nonspecific laboratory findings of visceral leishmaniasis include anemia, neutropenia, eosinopenia, and thrombocytopenia. Definitive diagnosis of visceral leishmaniasis requires the demonstration of either parasite by smear or tissue by culture (usually bone marrow or spleen). Myasthenia gravis is an autoimmune disease caused by antibodies to acetylcholine receptors in the post-junctional membrane of the neuromuscular junction. It typically presents with fatigable muscle weakness without any sensory or brain involvement. It is usually treated with corticosteroids and immunosuppressants like azathioprine. Here we encountered a confirmed case of myasthenia gravis on azathioprine with pancytopenia. While working up to evaluate pancytopenia, bone marrow examination revealed presence of Donovan bodies and the patient showed good response to liposomal amphotericin-B. In retrospect, a case of myasthenia gravis, who presented with pancytopenia presumably drug-induced, was found to have visceral leishmaniasis.

Keywords

Immunosuppression, myasthenia gravis, pancytopenia, visceral leishmaniasis

Visceral leishmaniasis, or kala azar, is an extremely rare condition encountered in the urban population of West Bengal, India. Also, its prevalence is very low among non-HIV-infected patients who are on corticosteroids or other immunosuppressive therapies. There is limited data on the risk factors for developing visceral leishmaniasis in persons on immunosuppressive treatment. Herein we describe a patient of myasthenia gravis on chronic immunosuppressive therapy suspected with azathioprine-induced pancytopenia but eventually diagnosed to have visceral leishmaniasis.

A 62-year-old gentleman, a resident of Kolkata, initially presented to the neurologist with ptosis & limb weakness and was diagnosed to have generalized myasthenia gravis. Repetitive nerve stimulation test was positive. He was started on pyridostigmine (60 mg every 6 hourly) and prednisolone therapy (starting dose 1 mg/ kg/day). Subsequently, azathioprine was added as a steroid-sparing agent, and prednisolone dose was tapered to 10 mg/day. After about a year of azathioprine therapy, he developed pancytopenia, but there was no fever or bleeding manifestations, and his myasthenic symptoms were well-controlled. There was no past history of blood transfusion or travel to kala-azar endemic districts. Azathioprine was stopped and bone marrow aspiration and biopsy was performed given the persistent pancytopenia (hemoglobin 6.6 gm/dl, MCV 111 fl, MCH 33.2 pg, total leucocyte count of 2,200/µL with 56% neutrophils, 33% lymphocytes, 11% monocytes, and platelet count 86,000/µL). Clinical examination revealed pallor, mild hepatomegaly (2 cm below costal margin), and moderate splenomegaly (4 cm below costal margin), but there was no peripheral lymphadenopathy, sternal tenderness or skin lesions. Renal and liver function tests, blood glucose, electrolytes, serum ferritin, iron, vitamin B12 and folate levels were normal; viral serology for HIV, HBsAg, anti-HCV were non-reactive. Bone marrow aspiration cytology and biopsy revealed normal trilineage hematopoiesis, adequate marrow storage iron along with numerous intracellular and extracellular Leishman-Donovan (L-D) bodies, thereby confirming the diagnosis of visceral leishmaniasis (Figure 1). The patient was treated with liposomal amphotericin-B (total cumulative dose of 21 mg/kg...
Visceral leishmaniasis is a potentially fatal infection of CL cases were diagnosed in immunosuppressed Overall, 31.3% of visceral leishmaniasis cases and 6.3% immunosuppressive conditions, mostly non-HIV-related. July 2009 and December 2012, 15.2% (Madrid (Leishmania - infection. In such patients, the occurrence of lymphopenia, anemia, pancytopenia or hypergammaglobulinemia even in the absence of fever or a positive travel history, particularly in kala azar-endemic countries should alert clinicians to include leishmaniasis in their differential diagnosis.

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Figure 1. (A) Romanowsky stain showing intracellular LD bodies within macrophage in High power view (40×) (A) and Oil immersion view (100×) (B): marked with arrow.
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Address correspondence to: Aroop Mohanty, Department of Microbiology, All India Institute of Medical Sciences, Rishikesh, Uttarakhand 249203, India.
E-mail: aroopmohanty7785@yahoo.com

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