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Case Report

Leishmanial Lymphadenitis: A Case Report with Review of Literature

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ABSTRACT

Leishmanial lymphadenitis (VL) is an unusual presentation of visceral leishmaniasis, can present either as isolated lymphadenopathy or in association with HIV. VL can be treated easily if identified early. Here we report a case of isolated lymphadenopathy in an 18 year old male from past 3 months without any coexisting immunocompromising condition and no skin manifestation. FNAC of the nodule revealed LD bodies in giemsa stained smears, thus confirming the presence of leishmanial lymphadenitis.
Key Word: Leishmanial lymphadenitis, VL, visceral leishmaniasis, lymphadenopathy

INTRODUCTION

Visceral Leishmaniasis also known as Kala Azar is a parasitic infection caused by obligate intracellular protozoa leishmania and is transmitted through hematogenous route to humans by the bite of infected female sandfly. Annual incidence rate of leishmaniasis is 0.5 million worldwide, out of which 90% of confirmed cases are diagnosed in India, Nepal, Bangladesh and Sudan. In India it is endemic condition in Bihar, west Bengal and in parts of eastern Uttar Pradesh. [1]

Leishmania species produce four different types of lesions in humans: visceral, mucocutaneous, cutaneous and diffuse leishmaniasis. In all the forms there is replication of parasite within the macrophages. The different types of clinical presentation depend upon the infecting parasitic species and the individual's immune response. Host factors that exacerate clinical development of disease are conditions that interfere with T cell functioning like malnutrition, immune suppression and most importantly HIV infection. [2]

CASE REPORT

An 18 years old male presented to out-patient department, MDM hospital with an isolated, painless, slightly enlarged nodular mass in left arm for past 3 month duration which is gradually increase in size. On clinical examination, no organomegaly and lymphadenopathy are seen. Laboratory test including haematological and biochemical parameters were all within normal limits with negative viral marker status. The fine needle aspiration cytology done yielded a thick aspirate. Smears revealed a polymorphous population of cells composed of lymphocytes, lympho-histiocytes clusters, epitheloid cells granuloma, plasma cells, tingible body macrophages along with multinucleated giant cells and macrophages infiltrated with numerous amastigotes form known as LD bodies (figure 1-3). A diagnosis of leishmanial lymphadenitis is suggested. On repeated clinical examination, no skin lesion found. Patient was advised for bone marrow examination and was started with 10 mg of sodium stibogluconate intravenously. Patient was kept under follow up.

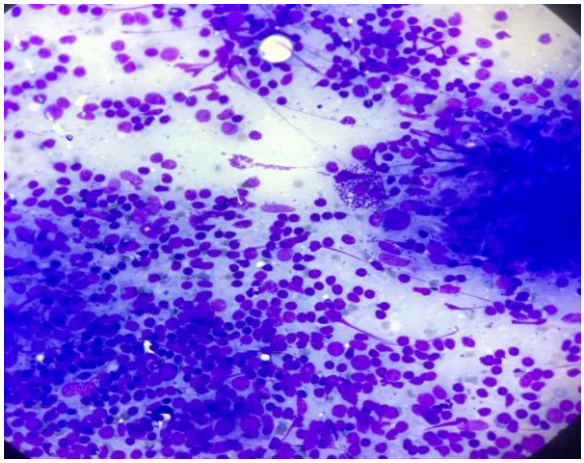

Fig -1 - Showing granulomatous reaction along with LD Body in the background of lymphoid population. (Giemsa, 40x)

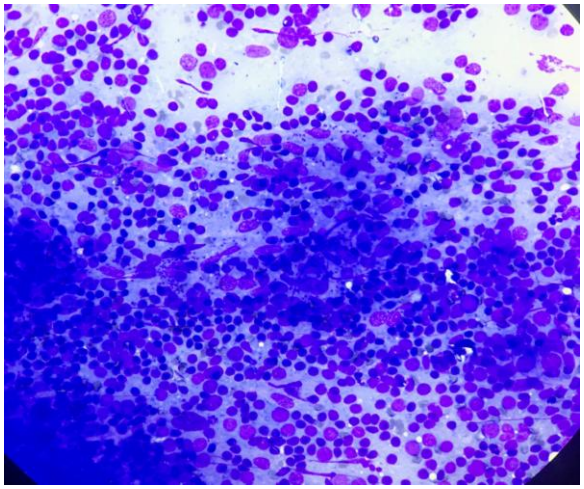

Figure 2 - Showing many intracellular as well as extracellular leishmanial parasite. (Giemsa, 40x)

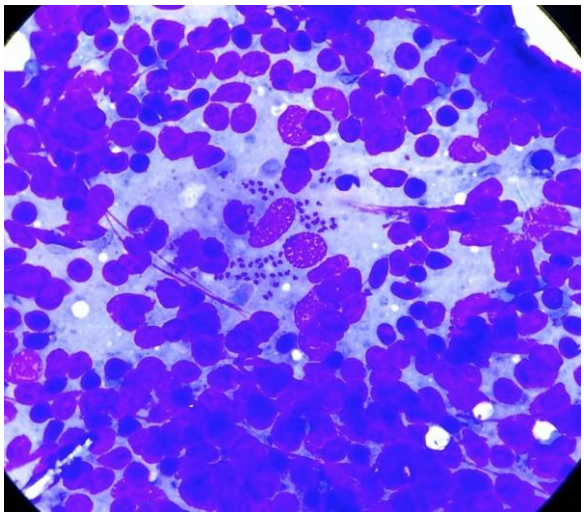

Figure 3 - Showing leishmanial parasite laden giant cell (Giemsa, 40x)

DISCUSSION

Leishmaniasis also known as kala azar is a fatal disease if left untreated. In India first case of leishmanial HIV coinfection was reported in 1999 from the sub Himalayan region. [3] Previous studies demonstrate a strong correlation of HIV infection coexistent with visceral leishmaniasis. Both HIV and VL coinfection modulate host immune system in such a way so as to favour their own survival and suppression of cell mediated immune response. As a result there is wide spread dissemination of parasite to uncommon sites like skin.

Visceral leishmaniasis clinical presentation varies from double peak fever, wasting, weight loss, hepatomegaly with pancytopenia and splenomegaly to completely asymptomatic infection. Lymphadenopathy in kala azar is a rare presentation in India, according to research papers only few cases have been notified till date. It's an incidental finding on fine needle aspiration cytology of an isolated peripheral lymphadenopathy in non endemic regions. Presentation of leishmaniasis in non endemic area might be due to migrant population from endemic regions. According to previous study done on visceral leishmaniasis in India that are being diagnosed in lymph node are seven till date. [4] Isolated lymphadenopathy is a rare presentation which can occur due to wide spread dissemination of parasite after the bite of sandfly.

Most common leishmanial species in India is leishmania donovani. There are two forms in the life cycle of leishmaniasis: one the promastigote form that lives extracellularly and replicates in sandfly and the other one is the amastigote form that replicates and lives intracellularly in host macrophages. Amastigote form is round form that lacks flagella but round nucleus and a kinetoplast, known as LD body in tissue macrophages. These LD bodies are pathognomic of leishmaniasis. [5] But at time there is only granulomatous lymphadenitis presentation without any LD bodies, which is then easily confused with tubercular pathology or toxoplasmosis. To differentiate it from tuberculosis AFB is done, its absence clearly rules out

tuberculosis. In toxoplasmosis, there is only granulomatous inflammation without any necrosis.

The diagnosis of visceral leishmaniasis is typically confirmed by microscopic examination of bone marrow, spleen, liver and lymph node aspiration cytology demonstrating characteristic Leishmania-Donovan bodies. Tissue biopsy along with immunohistochemistry can also be done for further confirmation. IHC panel of monoclonal antibodies is used against B-cells, T-cells, histiocytes and Langhans giant cells in lymph node biopsy. [6] Now a day's serology and molecular methods like PCR are also better alternatives. PCR allows rapid diagnosis along with determination of particular species, thus enabling the clinician a species oriented treatment. [7]

Treatment can be given locally or systemically. Local treatment is applied in patients having single, small lesion site. Systemic treatment is indicated in patients with mucosal lesion, or lymph node metastasis. So the Drug of choice for cutaneous leishmaniasis with isolated lymphadenopathy is either i.v. or i.m. pentavalent antimonials i.e. sodium stibogluconate. Other drugs that are also effective are pentamidine, imidazoles and miltefosine. [8]

CONCLUSION

Although isolated leishmanial lymphadenopathy with no other sign and symptoms is rare and can be easily confused on fine needle aspiration cytology with other causes of granulomatous lymphadenitis, most commonly with tuberculosis. Therefore demonstration of LD bodies in macrophages in FNA smears should be considered as diagnostic of leishmaniasis.

Conflict of Interest- All authors state that there are no conflicts of interests.

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