CASE REPORT

FILARIASIS PRESENTING AS BONE MARROW SUPPRESSION

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Lymphatic filariasis is caused by most commonly *Wuchereria bancrofti* in India. The diagnosis is made by demonstration of microfilariae in the peripheral blood, body fluids, fine needle aspirates and in bronchial brushings. Presence of microfilariae in the bone marrow is unusual and not been reported frequently. We are reporting here a case of a young male who had pancytopenia and was found to have microfilariae in the bone marrow.

Keywords: Microfilariae; Pancytopenia; Bone Marrow

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INTRODUCTION

Filariasis is a neglected tropical disease and still is a major public health problem in endemic areas in India. Lymphangitis, elephantiasis and peripheral blood eosinophilia are its common manifestation. The microfilariae circulates in blood and get lodged in various organs and body fluids.[1,2] It is also possible that they may get trapped in the bone marrow during their circulation in the peripheral blood.[3,4] Filariasis presenting as bone marrow suppression is a rare manifestation of this neglected tropical disease.

CASE REPORT

A 22 years old male presented with history of mild grade fever, generalized body weakness for 1 month. General examination revealed presence of severe pallor. Systemic examination was within normal limits with no organomegaly with a haemic murmur audible over precordium.

On investigating patient had haemoglobin (Hb) of 2.8 gm%, total leucocyte Count (TLC) of 2950 /mm^3($N_{65}L_{32}E_{03}$), manual platelet count (MPC) of 4,000/µl. Mean corpuscular volume (MCV) was 118fl, red cell distribution width (RDW) was 16.3%, and red blood cell (RBC) count was 650000/µL. General blood picture (GBP) revealed anisocytosis, microcytosis, hypochromic cells, target cells and macrocytes, moderate leukopenia and severe thrombocytopenia. His corrected reticulocyte count was 0.19% with normal renal and hepatic function tests. Lactase dehydrogenase (LDH) was mildly raised, 463U/L. Patient was given a trial of injection Vit B12 based on raised MCV and pancytopenia but he did not respond. His reticulocyte count after 5 days of injection Vit B12 was <0.7%. His Bone marrow aspiration was done which showed presence of few sheathed microfilariae lacking terminal nucleus suggesting it to be microfilariae of *Wuchereria bancrofti* with reactive plasmacytosis (5% Plasma Cells) [Figure-1]. The patient was treated with tablet diethyl carbamazine citrate at a dose of 6 mg/kg daily for twelve days with single dose of Albendazole (400) mg. A total of 5 units of Packed RBC, 10 units of Random Donor Platelet and 1 units of Single Donor Platelet was transfused to the patient during his hospital stay of 3 weeks. Patients hemogram improved and at the time of discharge, Hb was 10.2 gm%, TLC was 9200 ($N_{65}L_{34}E_{1)}$, MPC was 1.2 lac/uL, MCV was 94.3, corrected reticulocyte count was 6%, RDW was 16.0%, and RBC count was 1420000/µL. The patient showed further improvement on follow up.

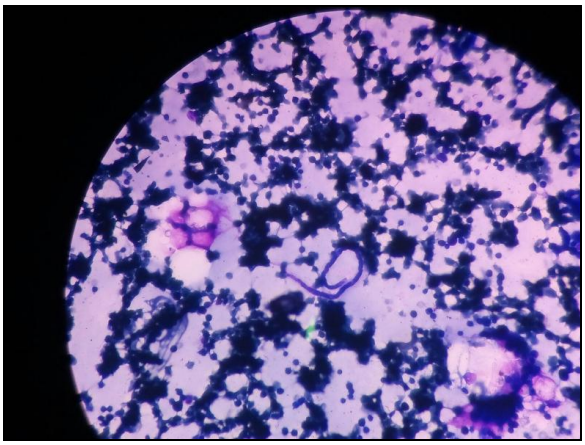

Figure-1: Sheathed microfilaria (W.Bancrofti) in bone marrow aspirate

DISCUSSION

Filariasis causing bone marrow suppression is rare and the mechanism how these microfilariae reach the bone marrow is not clear. However it is postulated that these microfilariae entered the bone marrow from microcirculation by piercing through the wall of blood vessel.[5] The Filarial infestation could be asymptomatic or could lead to aplastic, hypo-plastic or hyperplastic with a normoblastic or a megaloblastic marrow.[3–5] In our case, the pancytopenia with raised MCV suggested possibility of megaloblastic anaemia but patient did not respond to Vit B12 injections and provisional diagnosis of aplastic anaemia was made. However, microfilariae

was found in bone marrow which was then attributed to bone marrow suppression as the patient improved on treatment. Absence of the eosinophilia could be due to the altered immune status associated with the severe anaemia. Further documentation and investigations are needed to understand the mechanism of varied haematological manifestation caused by bone marrow filariasis.

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