Microfilaria of *Wuchereria bancrofti* in plasma cell myeloma: A case report

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Filariasis is a major health problem of the tropics and subtropics and is endemic in India¹. In India, *Wuchereria bancrofti* accounts for 90% of the total filarial infections². The disease can present as silent clinical disease or as lymphadenitis, lymphangitis or elephantiasis¹. The diagnosis is conventionally based on demonstration of microfilaria in the peripheral blood smear. There are very few case reports describing microfilariae in bone marrow aspirates³-⁵. Even after thorough search in the literature we could not find a case of microfilaria along with plasma cell myeloma in bone marrow smears. We present a case of plasma cell myeloma which was diagnosed on bone marrow aspiration and presence of microfilaria was overlooked.

**Case report**

A 65-yr-old male patient presented in outpatient department with complaints of weakness and bone pains. Patient was admitted in hospital for investigation. Peripheral smear examination showed rouleaux formation, mild microcytic hypochromic anemia and eosinophilia. A bone marrow aspiration was done. Bone marrow aspirate smears showed hypercellular cell trails (Fig. 1). Myeloid to erythroid ratio was 4:1. Erythropoiesis was showing normoblastic maturation.

Plasma cells; mature and immature, were about 50% of all the nucleated cells in the marrow. Many atypical, binucleated, trinucleated plasma cells were observed (Fig. 1 inset). Megakaryocytes were normal in number and morphology. X-ray of the bones showed multiple punched out lesion of skull and hip bone. The diagnosis given was plasma cell myeloma. Subsequently, the peripheral smear and bone marrow slides were discussed during one of the postgraduate teaching session where only one student reported the presence of microfilaria of *W. bancrofti* (Fig. 2), apart from myeloma cells. The peripheral blood smear and bone aspirate smear slides were reviewed again, and it showed presence of microfilaria in the peripheral smear as well. Follow up of the case could not be done as the patient did not turn up even after repeated contacts.

**DISCUSSION**

Filariasis is a widespread public health problem and is endemic in some parts of the world. There are many reports of finding the microfilaria incidentally on the aspi-
ration smears even in the absence of clinical signs and symptoms. There are few case reports reporting incidental finding of microfilaria in presence of malignant lesions either at primary focus or at metastatic sites. The presence of microfilaria along with neoplasm is thought to be a chance finding.

This case is presented here to highlight the importance of screening the slides carefully for the possibility of finding another coexisting pathology. Bone marrow aspiration is an important investigation while evaluating a case of multiple myeloma. Romanowsky stained aspiration smears stays important and rapid method for quantification of plasma cells and diagnosis of plasma cell myeloma.

In the present case, patient was having clinical symptoms of bone pain; hematological findings such as rouleaux formation, increased erythrocyte sedimentation rate, and X-ray of bone showed multiple punched out lesions in skull and hip bone. As the clinical findings and other investigations were suggestive of myeloma and bone marrow smear showed presence of typical and atypical plasma cells, a diagnosis of plasma cell myeloma was given. When the slides were being discussed for postgraduate training programme, the slides were reviewed by post-graduate students, where only one of them was able to detect the microfilaria present in the bone marrow aspiration smear. This illustrates the importance of screening of smears carefully even if the diagnosis is arrived.

The smears should be carefully screened particularly for the detection of microfilaria in endemic regions, so that appropriate treatment can be administered to avoid complications particularly in such asymptomatic patients.

REFERENCES


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