

## MICROFILARIA IN BONE MARROW

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### ABSTRACT

*F*ilariasis, a huge public health problem of the tropics and subtropics is commonly seen in countries like India, China, Indonesia, Africa<sup>1</sup> and the Far East.<sup>2</sup> Microfilariae have been found in many organs as well as in uncommon situations e.g. vagina,<sup>3</sup> nipple secretion,<sup>4</sup> ascitic fluid<sup>5</sup> and bone marrow.<sup>6</sup>

**Key words** – Microfilariae, Bone marrow, Wuchereria Bancrofti.

### INTRODUCTION

Lymphatic filariasis is a major health problem in India. Though control measures are effective, human population explosion plays a large role in the disease showing an upward trend.<sup>7</sup> However microfilariae are not so commonly found in fine needle aspiration cytology smears and body fluids. Small numbers of cases have been reported in bone marrow, pleural<sup>8</sup> and pericardial fluid.<sup>9</sup>

### CASE REPORT

A 40 years old male was admitted in J. Hospital with a history of weakness since 15 days. On examination he was emaciated, malnourished and had marked pallor and mild oedema. There was no hepatosplenomegaly or lymphadenopathy.

The patient was investigated for anemia and showed counts of - Hb - 4.4gms%, TLC- 2000/cumm and platelets-44,000/cumm. Peripheral blood smear showed severe hypochromia and mild anisopoikilocytosis. Platelets were reduced on smear.

The differential leucocyte count was polymorphs - 68% and lymphocytes-32%. There was no eosinophilia. Microfilaria was not detected in PBS.

Bone marrow aspirate examination revealed a diluted marrow with reduced M : E ratio. There was erythroid hyperplasia with megaloblastic and micronormoblastic maturation. The myeloid series was reduced,

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but normal in maturation. Megakaryocytes were reduced, but normal in morphology. Also seen in the aspirate were sheathed microfilariae of *Wuchereria Bancrofti*, which is the common species in India. The bone marrow biopsy revealed a normocellular marrow with erythroid hyperplasia. There was no microfilaria seen. Midnight peripheral blood smears taken subsequently did not reveal microfilaria.

## DISCUSSION

Lymphatic filariasis is caused by either *Wuchereria Bancrofti* or *Brugia Malayi*.<sup>10</sup> Adult worms lie in lymphatic vessels, while their offspring, the microfilariae circulate in peripheral blood.

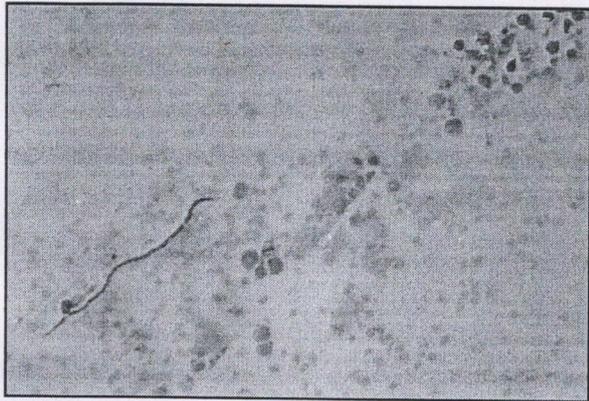


Fig. 1 : Low Power BM  
 ⚪ less cellularity & microfilaria

Pacheco and Orihel<sup>10</sup> demonstrated that non circulating microfilariae in microcirculation represent a major proportion of the total. Microfilariae in bone marrow may have migrated from the microcirculation. Drinker et al<sup>11</sup> pointed out that microfilariae can pass through unbroken blood capillaries, traverse tissue and re enter lymphatics. Present case report brings out clearly that microfilariae of *Wuchereria Bancrofti* can lie in the bone marrow.<sup>12</sup> The infection may be tolerated well and can exit without symptoms of microfilariaemia.<sup>12</sup> Relation of filarial infection and anemia is not clear and anemia may be an incidental finding.<sup>12</sup>

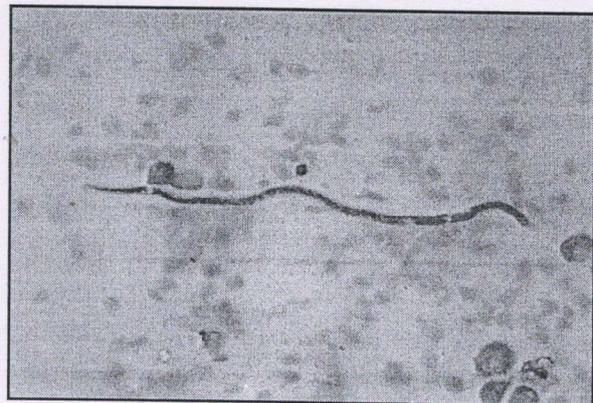


Fig. 2 : High Power  
 - Typical microfilaria wuchereria Bancrofti

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