MANSONELLA PERSTANS MICROFILARIAE IN PERIPHERAL BLOOD- A CASE REPORT FROM BIHAR

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ABSTRACT

BACKGROUND

Mansonella infections have rarely been found in India. Here we found a case of Mansonella perstans infection in Patna, Bihar. Bunches of microfilariae were found in the Giemsa stained peripheral blood smears. Identification was done morphologically. A combination treatment with diethylcarbamazine (DEC) and mebendazole was given for one month. In follow-up visit after one month, he was relieved of the symptoms as well as microfilariae from peripheral blood. Survey must be done to know the prevalence and more about the parasite in Bihar.

KEYWORDS

Mansonella Perstans, Microfilariae, Bihar, India.

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BACKGROUND

Mansonella perstans is a vector- borne human filarial nematode, transmitted by tiny blood- sucking flies called midges.¹ It is widespread in many parts of sub-Saharan Africa, parts of central and south America and the Caribbean.^{1,2}

Compared to infections with other filarial parasites, Mansonella infections are relatively mild.³ The overall disability among populations in regions where these filariae are endemic has been difficult to determine because of high rates of coinfection with other filariae and the non- specificity of M. perstans infections.³

Here we find a case of Mansonella perstans infection from Patna, Bihar; a state situated in northern part of India.

CASE REPORT

A fifty years old non-diabetic and non-smoker male from village area came to a private practitioner of the city with vague symptoms of mild cough, occasional wheeze, mild fever, headache and arthralgia, off and on for three months. The Giemsa stained slides of peripheral blood smears (thin and thick) were sent to the Microbiology lab, I.G.I.M.S. Patna (a tertiary care hospital) for comments and opinion.

Bunches of microfilariae were found in the slides (Fig. 1). Individual larva was recognized as that of Mansonella perstans by its characteristics of having blunt tails with their nuclei extending to the end of the tail and the absence of the sheath (Fig. 2 & 3).

Routine laboratory investigations were within normal limits except mild increase in eosinophil percentage (07%) in

differential count of blood and mildly elevated serum IgE level (>450 IU/ml, normal range, 0-380 IU/ml). Neither physical examination of the patient nor x-ray chest showed any abnormality or positive finding. There was no history of travelling to endemic area.

A combination treatment with diethylcarbamazine (DEC) and mebendazole was given for one month. In follow-up visit after one month, he was relieved of the symptoms as well as microfilariae from peripheral blood.

Figure 1. Microfilariae in bunch, under 10X, Giemsa staining

Figure 2. Microfilaria under 40X, Giemsa staining

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**Figure 3. Microfilaria under 100X,
Giemsa staining**

DISCUSSION

Mansonellosis has rarely been found in India.⁴ To the best of our knowledge, no case has been reported at Bihar hospitals till now. However, few cases belonging to the area has been documented by the All India Institute of Medical Sciences (AIIMS), New Delhi.

Mansonella infection usually is present as co-infection with some other filarial worm or parasite or bacteria.³ Here it presented singly. Some other cases also, from India have been documented as single parasite (Mansonella perstans) infection.⁴

The characteristic of absence of sheath is found in *M. ozzardi*, *M. streptocerca* and *Onchocerca volvulus* also. Morphological differentiation between them is done on the basis of other characteristics.⁵

As this infection is poorly studied, treatment recommendations are based on limited data. Diethylcarbamazine in combination with mebendazole

usually results in clearance of microfilaria of *M. perstans* in 37% at one month. Multiple treatments may be required for cure in individual patients, though there is not published evidence to guide a strategy.⁶

Prevention can be partially achieved through limiting contact with vectors by the use of repellents. The disease is generally asymptomatic or with mild symptoms; little has formally been done to control the disease.

CONCLUSION

Survey must be done to know the prevalence and more about the parasite in Bihar.

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