

Original Research Article

Unusual presentation of Filariasis in a tertiary care hospital in Western Rajasthan: A case report

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A B S T R A C T

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Filariasis is a neglected tropical disease whose infection is usually acquired in childhood causing hidden damage to the lymphatic system and is transmitted to humans through mosquitoes. A 26-year old female patient presented with a pea-shaped swelling in left elbow. FNAC of the swelling revealed multiple, thin, coiled, thread-like structures identified as *Wuchereria bancrofti* on Giemsa staining. Live, motile microfilariae were demonstrated in night blood sample (11 pm) in wet mount preparation and confirmation was done by demonstrating microfilariae in Giemsa-stained peripheral blood smears. We report this case as Rajasthan (India) is a non-endemic zone of filariasis. Also, the characteristic essential manifestations of this infection such as elephantiasis were absent at the time of presentation. Still, the patient was diagnosed and cured at a very early stage.

Introduction

Filariasis has been known from antiquity. *Wuchereria bancrofti* is distributed widely in the tropics and sub-tropics of Asia, Africa and South America. Over 900 million persons live in areas endemic for lymphatic filariasis and are therefore, at risk of infection. The largest numbers of cases of filariasis occur in India, where over 300 million people live in endemic zones. It is estimated that at least 6 million attacks of acute filarial disease occur every year in India and that over 15 million persons have chronic filarial disease. The endemic areas are mainly along the seacoast and along the banks of large rivers (Jayaram Paniker,

2007). According to a study, the status of microfilariae prevalence in various districts in India (2006) has been shown in Figure 1. Rajasthan is a non-endemic zone for filariasis. However, migration of people from endemic to non-endemic zones has resulted in occurrence of cases occasionally in non-endemic areas (Jindal *et al.*, 2014). There is a probability of spread of this parasitic disease in non-endemic areas also because of existence of its vector in such areas.

Case report

We are presenting a case of a 26-year old female patient, resident of district Balia of Uttar Pradesh. She is a housewife and migrated to Jodhpur in 2010 after her marriage, with history of frequent visits to her hometown (twice a year). She presented to the surgical OPD of Mathura Das Mathur Hospital associated with Dr S. N. Medical College, Jodhpur on 27.11.2014 with the chief complaint of a swelling in left elbow joint since 10 days which was associated with pain (Figure 2). On eliciting the history about the swelling, it was found that the patient first observed a pea-shaped swelling in left axilla 3 years back which gradually became double of its size and was later observed over medial aspect of mid-arm and finally over left elbow joint causing pain and restriction of her routine activities. The patient consulted at local primary health centres where she was prescribed anti-inflammatory and anti-allergic drugs but the swelling persisted. The patient complained of anorexia, weight loss (7 kg) and lethargy from last 3 years. However, there is no

history of pruritus, urticaria or rashes. Also, there is no history of cough, breathlessness, vomiting or diarrhoea. The patient is not a known case of any chronic debilitating illness like asthma, diabetes or hypertension. There is no family history of similar illness in any other family member.

On examination, a tense and tender swelling measuring 1.5 x 1.0 cm was found over flexor aspect of left elbow. On performing complete blood count (CBC) (Table 1), eosinophilia (12.90%) was seen with absolute eosinophil count of 950 per microlitre of blood. Fine needle aspiration cytology (FNAC) of the swelling revealed 1 ml clear, straw-colored fluid (Rawat *et al.*, 2009). On microscopic examination of Giemsa-stained smears prepared from the aspirated fluid, multiple, thin, coiled, thread-like structures (Figure 3) were identified as *Wuchereria bancrofti* due to presence of hyaline sheath, cephalic space: breadth ratio of 1:1 and regularly placed purple-coloured nuclei over the entire length with tail tip free of nuclei (Varghese *et al.*, 1996) (Figure 4).

Table.1 Complete blood count

Investigation	Before Treatment		After Treatment	
	Result	Percentage	Result	Percentage
HGB	9 g/dl		8.8 g/dl	
RBC	2.89 million/microlitre		2.83 million/microlitre	
PLT	186000		203000	
WBC	7360		10820	
Neutrophil	4260	57.8	4960	45.9
Lymphocyte	1990	27	3010	27.8
Monocyte	150	2	240	2.2
Eosinophil	950	12.9	2590	23.9
Basophil	20	0.3	20	0.2

Figure.1 District level mF prevalence in India (2006)

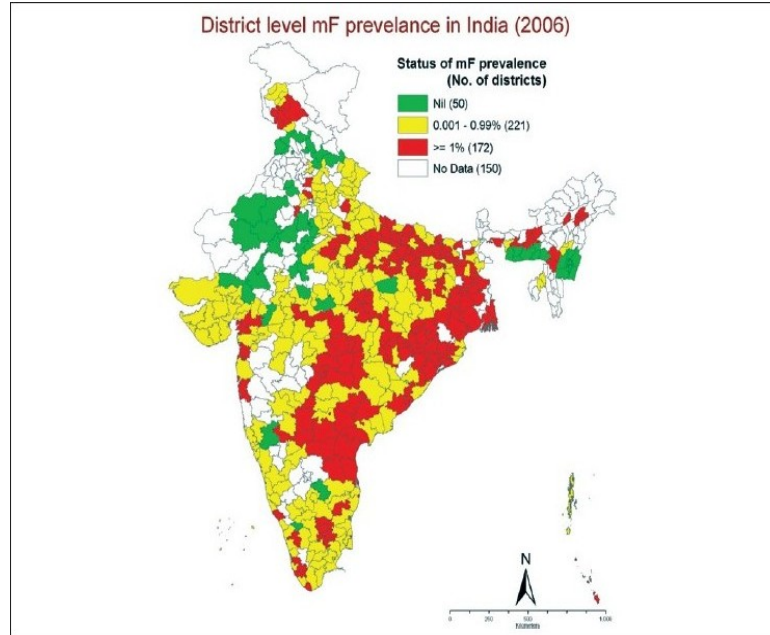


Figure.2 Swelling of 1 x 1.5 cm over flexor aspect of left elbow on the day of presentation



Figure.3 Giemsa-stained smear of lymph node aspirate in 10X

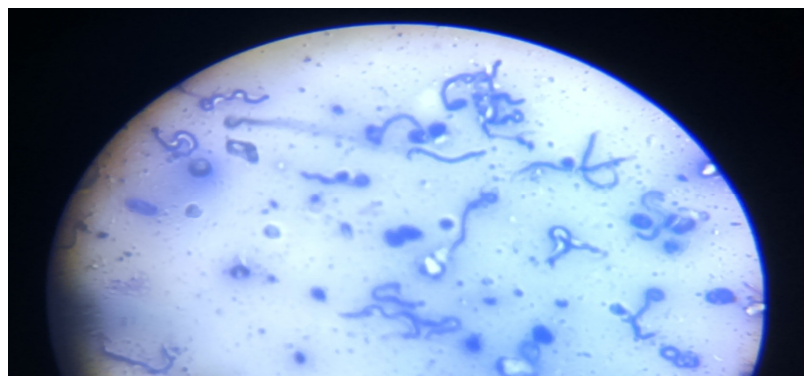


Figure.4 Oil immersion view (100X) of Giemsa-stained smear of lymph node aspirate demonstrating microfilariae of *Wuchereria bancrofti* with hyaline sheath and purple - coloured nuclei over the entire length with tail tip free of nuclei

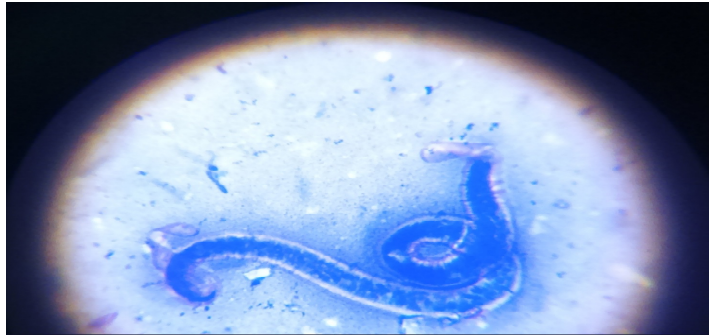
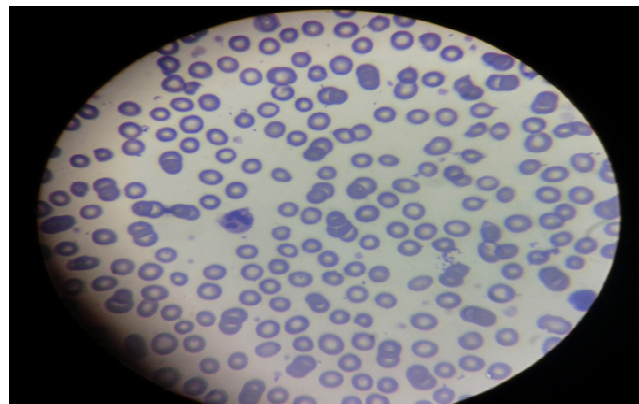


Figure.5 Giemsa-stained Peripheral blood film (PBF) from night blood (11 pm) sample under oil immersion demonstrating microfilariae of *Wuchereria bancrofti*



Figure.6 Peripheral blood film of patient after treatment with DEC for 21 days (100 X)



5 ml blood collected in EDTA vial was further used to prepare wet mount and Giemsa-stained thick and thin peripheral blood smears. However, no microfilariae

were observed. For further evaluation and confirmation, the blood sample was again collected in EDTA vial at 11 pm considering the nocturnal periodicity of *W.*

bancrofti. For wet mount, 2 drops of this blood was taken on a clean glass slide, coverslip applied, sealed with Vaseline and then examined under low power objective. Live, motile microfilariae of *Wuchereria bancrofti* lashing the blood cells were observed (Dey *et al.*, 1993). For stained preparations, thick blood smears were dehaemoglobinised by distilled water, fixed with methanol and then Giemsa staining was carried out.

Microfilariae were observed in the low power objective in the thick film and their morphology was confirmed in thin stained film as *Wuchereria bancrofti* (Figure 5). A chest X-ray (PA and Lateral) was unremarkable. The patient was prescribed DEC (diethylcarbamazine) 100 mg TDS for 21 days (Basu *et al.*, 2006) starting from 29.11.2014 to which the patient responded as shown by absence of microfilariae in PBF prepared from night blood sample taken on 20.12.2014 (Figure 6).

The patient presented with early manifestations of *W. bancrofti* infection of anorexia and malaise followed by lymphadenopathy. However, the characteristic essential manifestations of lymphangitis, lymphovariex, lymphorrhagia, lymphoedema (elephantiasis) were absent. This is a rare case because axillary lymph nodes were first involved, contrary to the abdominal and inguinal lymph nodes which are more frequently involved in *Wuchereria bancrofti* infection. The infection occurs virtually in all the states of India except North-West. Therefore, detecting a case of filariasis draws a concern for clinicians and microbiologists to have a high index of suspicion for patients migrating from endemic zones of filariasis and evaluate them with caution.

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