ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 6, Issue, 12, pp.11055-11056, December, 2014

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE STUDY

FILARIASIS IN SOUTHERN RAJASTHAN _A CASE REPORT

Dr. Singh, D. P., *Dr. Hemant Mahur, Dr. Kripa Shanker Jhirwal, Dr. Mayank ameta and Dr. Dilip singh mudghal

Department of Medicine, Maharana Bhupal Associate Group of Hospitals, R.N.T.Medical College, Udaipur, Rajasthan, India

ARTICLE INFO

Article History:
Received 15th September, 2014
Received in revised form
27th October, 2014
Accepted 08th November, 2014
Published online 30th December, 2014

Key words:

Culex quinquefasciatus,
Filariasis, Wuchereria bancrofti.

ABSTRACT

Lymphatic filariasis is caused by *Wuchereria bancrofti, Brugia malayi, Brugia timori* and are transmitted to man by the bites of infective mosquito. The thread like adult parasite reside in lymphatic channel and lymph node, where they remain viable for more than two decade manifesting as asymptomatic to acute and chronic symptoms like lymphangitis, lymphadenitis, elephantiasis of genitals, legs and arms or as a hypersensitivity state like tropical pulmonary eosinophilia or as an atypical form such as filarial arthritis. We report a 21 year old female residing in Udaipur, a city in south Rajasthan, presenting with filariasis, a region from where no indegenious case of filariasis is reported (National Filaria Control Programme and Recent Strategies, 2010).

INTRODUCTION

Filarial worms are nematodes belonging to superfamily filarioidae, are transmitted by mosquito Culex, Aedes and Anopheles as a vector for Wuchereria bancrofti in the world. In India Culex quinquefasciatus serves as major vector. We present a case of symptomatic filariasis which may be the only case reported from this part of Rajasthan.

Case report

A 21 year old female presented to outpatient department of M.B hospital Udaipur with history of high grade fever from 25 days with nausea and vomiting for which she had consulted many physicians and was treated for malaria and/or enteric fever which are endemic diseases in this area without any relief in the symptoms. There was no significant past and family history and travel to endemic area of filaria. On examination patient was febrile (100.8 Fahrenheit). Her pulse, blood pressure and respiratory rate were within normal limits. Her general physical examination was normal. There was no edema on any part of body, no lymphadenopathy, no hepatosplenomegaly and her cardiorespiratory status was normal except tachycardia. Her haemogram revealed lymphocytosis, eosinophilia with deranged liver enzymes. Peripheral blood film showed microfilaria of *W. bancrofti*. Patient refused for ELISA and PCR DNA of *W. bancrofti* and *B. malayi*.

Corresponding author: Dr. Hemant Mahur
Department of Medicine, Maharana Bhupal Associate Group of Hospitals, R.N.T.Medical College,Udaipur, Rajasthan, India.

Investigations revealed the following

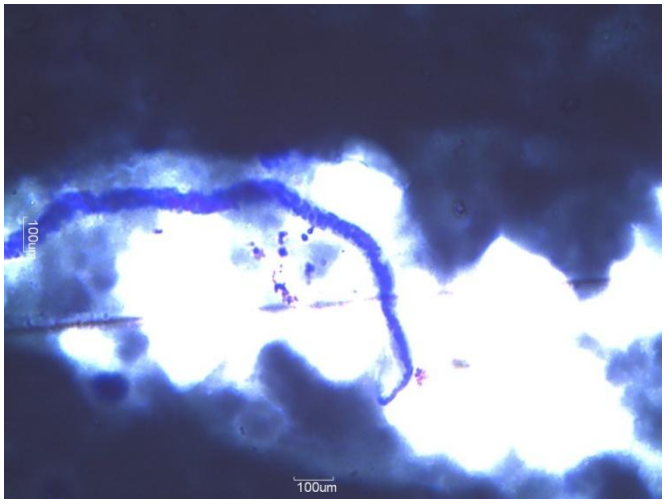
Haemoglobin	12.60
Total count	4400
Differential count	P-36, L-54, E-8, M-3
MP QBC	MICROFILARIA PRESENT
Blood sugar	102
Serum urea	14.9
Serum creatinine	0.41
SOGT	880.6
SGPT	515.4
S. bilirubin	0.86
PBF	Relative eosinophilia with microfilaria
Urine complete	NAD
Total eosinophilic count	352

Patient was treated with diethyl carbamazine 6 mg/kg body weight for 12 days and patient became afebrile by fifth day and patient was discharged after a week from hospital. On follow-up patient was afebrile and there was no micfofilarae in peripheral blood.

CASE DISCUSSION

Filarisis is a global problem, with major social and economic implications in the tropics and sub tropics where 120 million of 80 countries are affected (WHO 1998). Filariasis is a major public health problem in India where the disease is endemic all over India except North-Western States/UTs namely, Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh, Rajasthan, Delhi and Uttaranchal and North-Eastern States namely Sikkim,

Arunachal Pradesh, Nagaland, Meghalaya, Mizoram, Manipur and Tripura which are known to be free from indigenously acquired filarial infection (Ottesen, 1984). Culex, Aedes and Anopheles act as vector for *Wuchereria bancrofti* in the world. In India *Culex quinquefasciaius* serves as major vector for this disease.



Peripheral smear showing microfilaria

At least 8 species of filarial parasite are specific to man (Dissanike, 1979). Three nematode parasites causing LF in human are Wuchereria bancrofti, Brugia malayi and Brugia timori, of these, only Wuchereria bancrofti and Brugia malayi are found in India. In mainland India, Wuchereria bancrofti, transmitted by the ubiquitous vector, Culex quinquefasciatus (Witt and Ottesen, 2001), has been the predominant infection contributing to 99.4% of the problem in the country, man is the definitive host and mosquito serves as the vector. Adult microfilaria are usually found in lymphatic system of man. Male microfilaria are about 40mm long and females about 50-100mm long. The females are viviparous. They give birth to as many as 50,000 microfilariae per day (Duke, 1993) which find their way into blood circulation via lymphatics. Lifespan of microfilaria is upto a year or more. Adult worm may survive for fifteen year or more (Carme, B Laigret, 1979). *W. Bancrofti* has no animal reservoirs in India. In humans source of infection is a person with circulating microfilaria in peripheral blood.

It was reported that a man with one microfilaria per 40c.mm of blood was infective to 2.6 percent of the mosquitoes that feed on him (Sharma, 1977). The time interval from invasion of infective larvae to the development of clinical manifestation is known as “clinical incubation period”. This period is most commonly 8-16 months (WHO 1984).

Only a small proportion of infected individuals exhibit clinical signs. The disease manifestations can be divided into two distinct types: (a) lymphatic filarisis caused by the parasite in the lymphatic system, and (b) occult filariasis caused by an immune hyperresponsiveness of the human host (e.g., tropical pulmonary eosinophilia). There are four stages of lymphatic filariasis (A) Asymptornatic amicrofilaraemia, (B) Asymptomatic microfilaraemia (C) Stage of acute manifestations, (D) stage of chronic obstructive lesions. Filariasis most commonly presents as asymptomatic microfilaremia, hydrocele, acute adenolymphangitis and chronic lymphatic disease (Thomas, 16th Edition). Asymptomatic patients can have some degree of subclinical manifestation including microscopic hematuria and/or proteinuria (Dreyer *et al.,* 1992) dialated lymphatics and scrotal lymphangiectasia or pleural effusion (WHO 1984).

The treatment of lymphatic filariasis is Diethycarbamazine (DEC) 6 mg/kg daily for 12 days which has both macro and microfilariocidal properties, remain the treatment of choice. Alternative treatment is albendazole 400 mg bid for 21 days, this has less microfilaricidal efficacy than DEC. An 8 week course of daily doxycycline has significant microfilaricidal activity as 7-day course of daily DEC/albendazole.

Community based intervention is the current approach to prevent filariasis that includes mass annual distribution of antimicrofilarial chemotherapy - albendazole with either DEC or ivermectin that will profoundly suppress microfilaria in community.

REFERENCES

Carme, B, Laigret, 1979. *Am. J. Trop. Med. Hyg.,* 28:53.

Dissanike, A.S. 1979. *Bull WHO*, 57(3)349.

Dreyer G., Ottesen E.A. and Galdino E. *et al.* 1992. Renal abnormalities in microfilaremic patients with bancroftian filariasis. *Am. J. Trop. Med. Hyg.,* 46:745-751.

Duke BO. 1993. The population dynamics of Onchocerca volvulus in the human host. *Trop. Med. Parasitol.,* 44(2):61-68.

National Filaria Control Programme and Recent Strategies, 2010.

Ottesen, E.A. 1984. *Trans. R. Soc. Trop. Med. Hyg.,* 78 (Suppl)

Sharma, S.P. 1977. *J. Com. Dis.,* 9:111.

Thomas B. Nutman, Peter F Weller. Filarial and related Infections: Harrison’s Principles of Internal Medicine: 16th Edition Mc Graw Hill: Vol. 1 Page1260-63

WHO 1984. *Techn. Rep. Ser.,* No.702.

WHO 1998. A vision For All, Report of the Director General, WHO.

WHO Tech. Rep. Ser 1984; 702:1-112.

Witt C and Ottesen, E.A. 2001. Lymphatic filariasis: an infection of childhood. *Trop Med Int. Health,* 6: 582.

****