



MICROFILARIA IN A PATIENT OF HEMATURIA: A RARE FINDING IN URINE CYTOLOGY

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Received 27th August 2015; Published 30th September 2015

Abstract

Filariasis is an endemic condition in parts of Bihar. Microfilariae have been commonly seen in peripheral blood, lymph node and subcutaneous smears. However, we found microfilariae in normally voided urine sediment of a patient who presented with haematuria. We present this rare occurrence.

Keywords: Microfilariae, Urine Sediment, Hematuria

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To cite this paper: Dr. Rashmi Singh, Dr. Mahasweta Mallik and Dr. Navin Kumar Bariar 2015. Microfilaria in a patient of hematuria: a rare finding in urine cytology, *International Journal of Information Research and Review*. Vol. 2, Issue, 09, pp.1142-1143, September, 2015

INTRODUCTION

The state of Bihar has highest endemicity for filariasis in India. *Wuchereria bancrofti* is a human parasitic roundworm and is the major cause of lymphatic filariasis in the Indian subcontinent. They are usually detected in peripheral smears, lymph nodes and lymphatic vessels. But detection of microfilariae in normally voided urine submitted for routine examination is a rare finding.

Case Report

A 30 year old male from Barh, Bihar presented with painless, intermittent haematuria since 3 months, in a physician's outpatient department. He has no other clinical signs symptoms. He was sent to our lab for complete blood count, night peripheral smear exam, routine examination of urine and urine culture. The complete blood count was within normal limits for the age and sex. The night peripheral smear exam did not show any parasite. The urine sample was centrifuged at 3000rpm for 5 minutes. Physical exam was within normal limits and chemical exam showed trace albumin. Microscopic exam of smears made from the sediment showed - RBCs - 2-3/hpf.

Urothelial cells - a few

and a few motile microfilariae under 10X objective. Under high power sheathed coiled parasites with central strand of nuclei and no terminal nuclei were seen. Thus this was reported as a case of *Wuchereria bancrofti* microfilariasis.

The patient responded to a complete course of diethylcarbamizole and became asymptomatic.



DISCUSSION

Filariasis is a parasitic disease caused by an infection with nematode of superfamily filarioidea in India *wuchereria bancrofti* is the main cause of filarial infection and the state of Bihar shows the highest endemicity (National Vector Borne Disease Control Program, ?). Most infected people are asymptomatic and never develop clinical symptoms. Following infection with third stage larvae, there is usually a period of vigorous immature response to the invading larvae. If the larvae are not cleared from the body during this period, then various pathologies associated with filarial infection can

develop. Common conditions produced are lymphangitis, lymphedema, hydrocele chyluria & later on elephantiasis. Webber *et al* first reported microfilaria in a 23 yr old male in during a routine urine examination for painless intermittent haematuria (Webber and Eveland, 2008). To the best of our knowledge, only a few cases of bancrofti have been reported in voided urine sample in literature (Arvind Ahuja *et al.*, 2012). In most of these reported cases there was a history of chyluria (Arvind Ahuja *et al.*, 2012). The explanation of non-chyluric hematuria may be that significant lymphatic obstruction may not have taken place, therefore patient did not present with chyluria. In recent years several serological & immunological tests have been developed to detect filarial infection (Harrison's, 2008)

Detection of filarial DNA by PCR is regarded as the most sensitive technique for making a definite diagnosis of filarial infection.

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