

# Larvae of *Strongyloides stercoralis* in the Venous Blood of a 25 Year Old Female Patient at the National Hospital, Abuja Nigeria

I Peletiri, N Ibecheozor, L Moses, K Iregbu

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## Abstract

A 25 year-old female patient with a history of recurrent pruritus, particularly especially in the evenings over the course of about six years, was seen at the Family Medicine Clinic, National Hospital, Abuja Nigeria in April, 2008. Both diurnal and nocturnal blood samples of the patient were analyzed using 2% formol water and stained with 1% Giemsa stain for 30 minutes. The result was an unusual occurrence. While the diurnal samples had microfilariae of *Mansonella* species, the nocturnal samples in addition to microfilariae of *Mansonella* species also had larvae of *Strongyloides*

*stercoralis*. This paper is to draw the attention of practicing biomedical scientists of unusual results while processing specimens in our laboratories.

## INTRODUCTION

A 25 year-old female patient with a history of recurrent pruritus, particularly especially in the evenings over the course of about six years, was seen at the Family Medicine Clinic, National Hospital, Abuja. According to the patient, the problem started when she was living in Lagos. She now lives in Jos while schooling at Yola, Adamawa State. This patient was sent to the Parasitology laboratory for blood filariasis test. Both diurnal and nocturnal blood samples of the patient were analyzed at the Parasitology laboratory.

## MATERIALS AND METHOD

### MATERIALS

### COLLECTION OF BLOOD

2 ml of both diurnal and nocturnal venous blood samples were collected from the patient into 2% sodium citrate solution. While the diurnal sample was collected at about 12:00 noon (10:00-2:00pm), the nocturnal sample was collected at about 10:00 pm (10:00pm – 2:00am).

### METHOD FOR EXAMINATION OF HAEMOLYSED VENOUS BLOOD CONCENTRATION METHOD

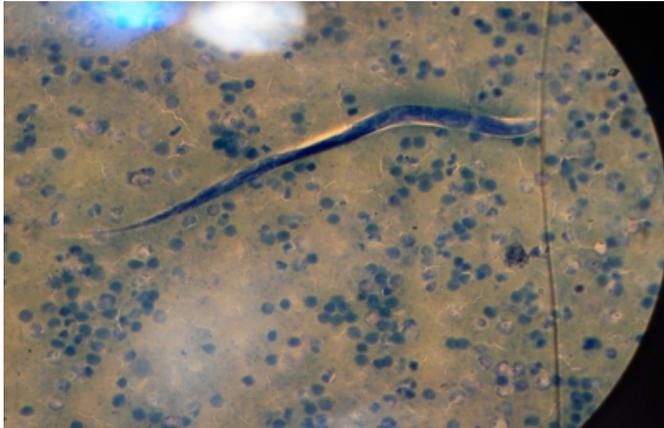
ml of venous blood was added to 9 ml of 2 % formalin solution in a tube; mixed and allowed to stand for 5 – 10 minutes for the red cells to haemolyse. The blood / formalin mixture was centrifuged at 1000 rpm for 10 minutes. The supernatant fluid was discarded and the deposit resuspended. The deposit was transferred to a slide to form a thin smear and the preparation examined microscopically at 10 x and 40 x objectives. Positive slides are allowed to dry in the air overnight and stained with 1 % Giemsa stain for 30 - 45 minutes. The stained slide is then washed with water and allowed to air dry. Th examination of stained slide was with 100 x objective.

### RESULT

Both the diurnal and nocturnal blood samples had microfilariae of *Mansonella* species. The nocturnal blood sample also had larvae of *Strongyloides stercoralis*.

**Figure 1**

Fig i: Picture of Larvae of



**DISCUSSION**

The presence of *Strongyloides stercoralis* in blood is an unusual occurrence. Repeated blood sample collection corresponded with initial blood sample result. During hyperinfection, filariform larvae may gain access to the arterial circulation, thereby allowing dissemination to numerous tissues and solid organs. Infact, filariform larvae have been recovered from biopsies of lymph nodes<sup>(1)</sup>, endocardium<sup>(2)</sup>, pancreas<sup>(3)</sup>, liver<sup>(2)</sup>, kidney<sup>(4)</sup>, and brain<sup>(5)</sup>. In 1991, Onuigbo and Ibeachum<sup>(6)</sup> reported encountering a case

of *Strongyloides stercoralis* larvae in peripheral blood.

It is interesting to note that repeated examination of this patient's faecal samples had no larvae of *Strongyloides stercoralis* or any other parasite.

This case report is to draw the attention of practicing biomedical scientists and other medical researchers of unusual results while processing specimens in our laboratories.

**References**

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**Author Information**

**I.C. Peletiri**

Dept. of Medical Microbiology & Parasitology, National Hospital

**N.K.O. Ibecheozor**

Dept. of Medical Microbiology & Parasitology, National Hospital

**L.A. Moses**

Dept. of Family Medicine, National Hospital

**K.C. Iregbu**

Dept. of Medical Microbiology & Parasitology, National Hospital