

An Eccentric Presentation Of *Trichuris trichiura*: "A Case Report"

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Abstract:

Background:

Helminth parasites having distinct morphology in egg, larva or adult stages makes them easy to identify and treat their infections. *Trichuris trichiura*, a whip shaped worm with a bile-stained barrel shaped egg, change their morphology as they pass through various stages in their life cycle. The present case shows the atypical morphology of the parasitic egg, which can sometimes make it difficult to identify. Reporting to the clinicians of any relevant parasitic form to clinicians would be better than to disregard any unusual form as artefacts.

Conclusion: Any atypical form in stool should be differentiated from artefacts, before reporting to the clinicians.

Key Word: *Trichuris trichiura*, morphology, atypical form, artefacts

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I. Introduction

Of the 8.5 billion world's population, soil borne helminths infect over 1.5 billion, mainly in people with low per capita income and poor sanitation conditions. People living in sub-Saharan Africa, China, South America and Asia were the most affected, and among these, middle school-age children were mostly affected. In soil transmitted helminths, *Ascaris*, Hookworm and *Trichuris* were the parasites which were mainly causing infections in the humans. ^[1]

Since Linnaeus (1771) and Stiles (1901) discovery of whipworm, there has been a lot of studies which helped us to delve in to the world of whipworm. ^[2] There is a lot of variation in the development of eggs of helminths due to the climatic conditions ^[1], antiparasitic drugs ^[3] and the time of examining the stool sample ^[4], which can make the diagnosis difficult.

II. Case Presentation:

The present case is of a 12-year-old child with history of diarrhea. Initially he was treated with antibiotics and oral rehydration therapy for 5 days on an outpatient basis, which was of no use. He was later admitted due to increase in frequency of diarrhea with loose stools, anemic and slightly pyretic. He had similar complaints one year back. Initial stool sample showed numerous pus cells, occasional mucus flakes, Charcot Leyden crystals and Red Blood Cells. No parasite was seen. Except hemoglobin, his blood, renal, lung and liver parameters, and radiological findings were normal. On repeated stool examination, the sample showed various varied morphology of the *Trichuris trichiura* eggs. Instead of oval shaped egg with distinct mucus plugs at both the ends, there were few morula-like structures and spherical to oval eggs without or with only one mucus plug like structures. One oval shaped structure morphologically similar to that of *Trichuris trichiura* egg, but with unequal mucus plugs at both the ends was seen. In one field, the larva can be seen coming out of the egg. (Fig 1 & 2) The patient was treated with albendazole and was healed completely.

III. Discussion

The abnormal eggs can be ascribed due to the previous treatment with albendazole (which can cause distortion of eggs in female *Trichuris* worm) ^[3, 5], and to some extent delay in sending the sample to laboratory or examining it with in the turnaround time. ^[4] Although the large size of the egg appears in one of the eggs with mucus plugs at the poles mimic *Trichuris vulpis* egg which causes infection mainly in dogs and occasionally it causes zoonotic disease in humans. ^[5] The eggs of *T. vulpis* can be differentiated from *T. trichiura* by their bigger and lemon shaped morphology. ^[6]

IV. Conclusion

This stresses the fact that stool sample must be examined carefully without disregarding any abnormal shape as artefacts and to have a thorough clinical history of the patient. It would be better to inform the clinicians of any abnormal shapes in the microscopy correlating with the clinical history rather than giving a false negative report.

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Figures

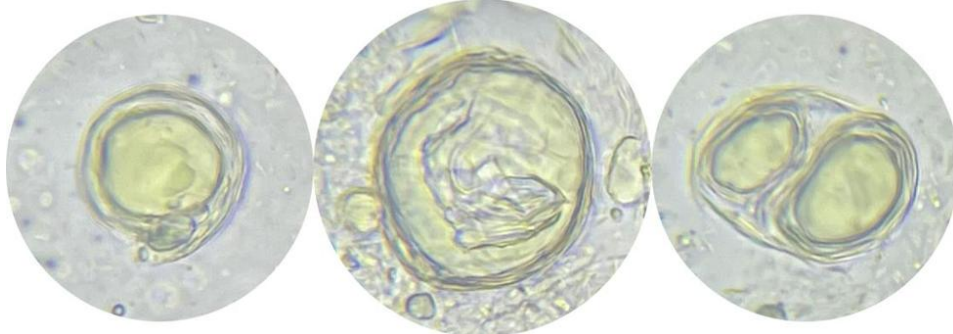


Figure 1

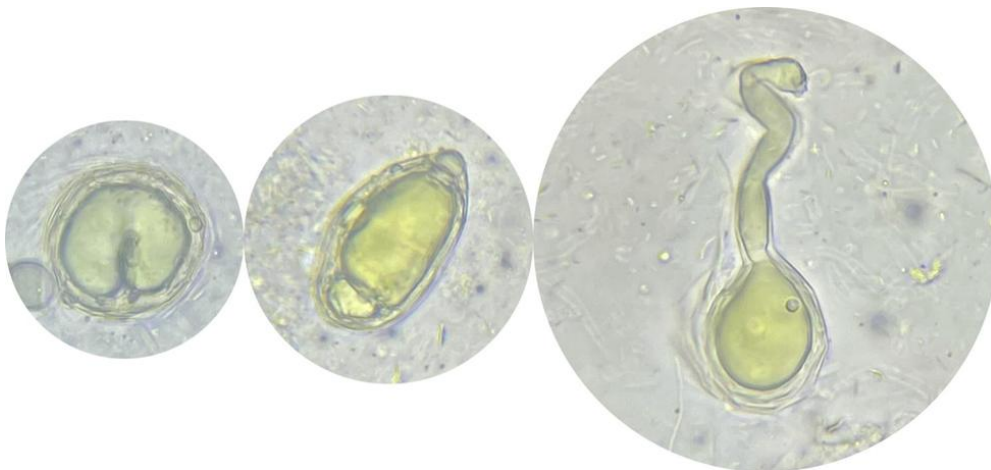


Figure 2