

## Enterobius vermicularis (Pinworm infection) in HIV infected patient with chief complain of uncontrolled diarrhoea

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### Abstract

Enterobiasis is a uncommon nematode infestation that can be caused uncontrolled diarrhoea in HIV infected patient. It is an important tropical infection that can affect the patients at any sexes and age groups. The present of enterobiasis in HIV infected patients is of interest. In this short article, the authors summarize on Enterobiasis in HIV infected patients.

**Keywords:** HIV; Enterobiasis; Diarrhoea.

### Introduction

*Enterobius vermicularis*, often referred to as pinworm, is an intestinal nematode which commonly infects children [1]. Transmission of *E. vermicularis* eggs occurs through the fecal-oral route, with eggs being directly inoculated from the fingers into the mouth. The migration of the female worm to the anus causes pruritus, which is the most common symptom of pinworm infection [2,3]. We have reported the *Enterobius vermicularis* infection in to Adult patient suffering from HIV infection with chief complaint of uncontrolled diarrhoea.

### Case Report

A 41 yrs old male patient, who belong to Western Part of India having H/O Retrovirus illness detected in year 2007. Patient was on treatment of ART (AZT + ZTC + NVP) from 2009 to 2011. At that time complain of low grade fever, generalise weakness and loss of appetite. Patient has history of Pulmonary Koch & AKT taken for Total 12 months

Patient CD4 count, 70/cmm in year Nov 2011, 108/cmm in year Feb 2012, 20/cmm in May 2012, 168/cmm in March 2013, 106/cmm in Dec 2013, 131/cmm in March 2014, 63/cmm in May 2014, 127/cmm in Dec 2014, 74/cmm in Feb 2015, 62/cmm in July 2015, 31/cmm in Nov 2015, 216/

cmm in Feb 2016, 290/cmm in May 2016, 91/cmm in Nov 2016.

Patient HIV viral load count was 15340800 (IU/ml) in May 2014, 14370 (IU/ml) in Nov 2015. Patient HIV drug resistance genotyping show -

Patient was on Following ART regime

2009 to 2011 – AZT +ZTC+NVP

2012 to 2016– AZT+RTV+TNF+FTC

Patient came with chief complaints of loss of appetite, coughing, dysphagia, abdominal discomfort and oral thrust since one month, watery diarrhoea since 15 days. Gradually diarrhoea worsen. Patient has no complain of pruritis. His CD4 count was 23/cmm. Stool sample were sent for Microbiology work up – Bacterial Culture, Modified Z.N Stain, Wet preparation for parasite and occult blood. Stool was negative for *Cryptosporidium* species, *Blastocystis spp.*, *Isospora belli*, *Giardia lamblia*, *Entamoeba histolytica* and *Strongyloides stercoralis*, Bacterial culture grown *Escherichia coli* and yeast (considered as Normal flora). Ocult blood was positive and mucus were present. Stoll was positive for plenty eggs of *Enterobius vermicularis*. USG abdomen shows fluid in right colon, sign of mild colitis and mild haepatomegaly.

After having report of eggs of *Enterobius vermicularis*, patient treated with Oral Mebendazole 100mg stat and oral Albendazole 400mg twice a day for 3 days. Gradually diaerrhoea controlled and patient become stable with in 5 days of treatment.

## Discussion

Chronic infection with parasite are common in India. *Enterobius vermicularis*, often referred to as pinworm, is an intestinal nematode which commonly infects children throughout the world. Transmission of *E. vermicularis* eggs occurs through the fecal-oral route, with eggs being directly inoculated from the fingers into the mouth. Fomites may also play a role in transmission. The eggs are infective shortly after being laid, making autoinfection a common route of intestinal infection. Following ingestion, the embryonated eggs hatch in the small intestine and develop into adult worms that reside in the cecum, appendix, colon, and rectum. Male and female worms mate in the human intestinal tract, and the gravid female worm migrates to the anus to lay partially embryonated eggs on the perianal and perineal

surfaces. The migration of the female worm to the anus causes pruritus, which is the most common symptom of pinworm infection (2, 3). Less commonly, the presence of adult worms in the appendix can lead to obstruction, inflammation, and resultant appendicitis (4, 5). Rarely, the adult worms can become lodged in the intestinal mucosa and cause intestinal abscess (1)

HIV infection has been modifying both the epidemiology and outcome of parasite infections. Opportunistic parasitic infection in HIV infected patient is common. The common opportunistic pathogen in HIV infected patients are *Cryptosporidium* species, *Blastocystis spp.*, *Isospora belli*, *Giardia lamblia*, *Entamoeba histolytica* and *Strongyloides stercoralis*.(6)

The reported prevalence rates of *Enterobius vermicularis* in HIV infected patients from Kenya, Ethiopia, Vietnam, Congo and South Africa are equal to 1.9%, 1.3 %, 0.9 5, 0.6 %, and 0.6 %.(7)

In this case the clinical presentation of Enterobiasis was atypical. Enterobiasis usually occurs to children and the chief complains are pruritis in anal region. In this case the chief complaint was uncontrolled diarrhoea.

## Conclusion

Enterobiasis can be seen in the patients with HIV infection. This parasitic infestation might be silent or produce severe clinical problems. The concern on this parasitic infestation among HIV infected patient is needed. No doubt that if there is existence of enterobiasis, regardless of symptom, the antiparasitic drug should be provided to the HIV infected patients for prevention of unwanted further complication. Focusing on the use of antiparasitic drug, ARVT and antituberculosis drugs were observed to be better tolerated in HIV infected patients.(8)

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