

## Case Report

### A Rare Case of Recurrent Fistula in Ano with the Pin Worms in the Fistula Tract

Aashka Bhatt\*, Chirayu Thakkar\*, Tapan Shah\*\*, Shaishav Patel\*\*\*, Asit Patel\*\*\*\*, Yogendra Modi\*\*\*\*\*

\*Resident \*\*Associate Professor \*\*\* Assistant Professor \*\*\*\*Professor & Head Department of Surgery, AMCMET Medical College, Maninagar, Ahmedabad \*\*\*\*\* Dean & Professor Department of Surgery, GCS Medical College and Research Institute, Ahmedabad.

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#### ABSTRACT

*Enterobius vermicularis* is an obligate parasite residing in the host colon. The route of transmission is faecooral with the life cycle starting with ingestion of viable eggs, which hatch in ileum and the larvae maturing in the caecum. The gravid adult worm then migrates to the perianal region where it lays its eggs. A 35 year old male, farmer by profession came with the complain of pus discharge from opening over perianal region since last 10 days. Fistulectomy of patient was done two times in last two months suggestive of recurrent anal fistula. Intraoperatively worm was found in fistula tract accidentally which was sent for microbiology examination and confirmed as *enterobius vermicularis*.

#### INTRODUCTION

*Enterobius vermicularis* is a helminthic infection, affecting almost 1 billion people worldwide from all socioeconomic classes. There is high prevalence rate among children, homosexuals and family contacts.

Prevalence in children is reported to be 0.2-20%. In adults, it occurs because of transmission from their children aged 5-9 yrs.

#### CASE REPORT

A 35 year old male, farmer by profession, came with the complain of pus discharge from opening over perianal region since last 10 days which was painless, intermittent in nature, associated with complain of reduced appetite, not associated with fever or weight loss.

Patient had the surgical past history of fistulectomy for similar complains two times in the past two months.

Patient had no significant family or personal history other than reduced appetite.

On Examination : Well built and moderately nourished and vitally settled with no pallor/cyanosis/clubbing/edema/lymphadenopathy/icterus.

On Local Examination, external opening of fistula in ano was found at 9 o'clock position with active pus discharge coming out from same opening. Skin surrounding opening was edematous, with mild redness. No sentinel tags / haemorrhoids seen. No active bleeding per rectum present, while internal opening of fistula in ano was present at 10 o'clock position approximately 1.5 cm from anal verge. Anal sphincter tone was normal and digital

examination was painless. On proctoscopy, active pus discharge seen coming out of internal fistulous opening. No active bleeding points seen.

#### INVESTIGATIONS

All blood reports were within normal limits.

Ultrasonography of perianal region: 26mm long and 6 mm wide tract noted in perianal region at 9 o'clock position and approx. 20\*16 mm sized collection noted adjacent to it.

MRI of perianal region was suggestive of intersphincteric fistula in ano.

#### PER OPERATIVE FINDINGS

Anal fistulous tract with its external opening at 9 o'clock and internal opening at 10 o'clock, which was 1.5 cm from anal verge was found.

During the dissection of tract, worms were found in the fistula tract as an accidental finding which were sent for microbiology examination and were confirmed as *enterobius vermicularis* and whole of the fistula tract was then excised and sent for tissue HPE. (Fig II)

#### DISCUSSION

Threadworms or pinworms are known to migrate to ectopic sites and have been reported in the female urogenital tracts as well as noted in within granulomas seen in liver, spleen, mesentery, and even in association with inguinal hernia<sup>1,2,3</sup>. These parasites are thought to migrate through pre existing tracts, breaches in the intestinal mucosa and also to penetrate healthy intestinal wall<sup>1,2</sup>.

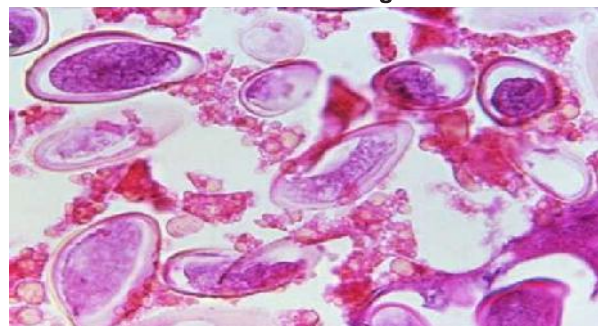
**Correspondence Address :** Dr. Tapan A. Shah  
(AMCMET Medical College)  
"Ratnakar" 19, Sarthi-3, Drive in, Ahmedabad.

### I : Intraoperative picture



**Fig I : Pinworms seen as an accidental finding in fistula tract intra-operatively.**

### II : HPE finding



**Fig II : Histopathological examination showing pinworm eggs confirming pinworm infection in fistula tract.**

Several large series of perianal sepsis in children make no mention of this parasite<sup>5,6,7</sup>. The first report of such an association was provided by Mortenson<sup>8</sup> who reported amotile threadworms in an abscess cavity and documented an acute inflammatory response with a number of threadworm ova in the abscess wall. No pathophysiological mechanism for the abscess development was, however, proposed.

Hallisay has drawn attention to the association of *Enterobius vermicularis* with perianal sepsis but the two cases described were only confirmed on proctoscopic examination which revealed viable adultworms in the area of the anal crypts and there was no histological confirmation of direct involvement<sup>6,7</sup>.

One possible explanation for the involvement of *enterobius vermicularis* in recurrent fistula in ano is direct migration of parasite through the healthy mucosa into the

perianal tissue where they may cause focal irritation culminating in abscess formation. A more plausible explanation consistent with the finding in our patient is the parasites opportunistically enter pre existing fistula and glandular crypts abscess result either from occlusion of openings of glands or fistula or from reaction to ova deposited in the wall or to parasites within the lumen. Avolioetal and Mattia presented compelling support for this theory by demonstrating a perianal granuloma associated within a deep crypt and normal surrounding squamous surface epithelium supporting the hypothesis of worm entry by way of a crypt. They further postulated that,as an extension of this process,granulomata separate from the crypts making identification of origin via this route extremely difficult Reports of this aetiology are rare but should be suspected when there is a marked reaction around perianal collection as well as when abscesses occur recurrently.

### CONCLUSION

Presentation of pinworm in recurrent anal fistula in adults, a rare finding, is mainly per operative finding rather than found in any other investigations. Treatment is to give anti parasite medications after excision of whole fistulous tract.

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