



## Pin Worm Causing Appendicitis a Rare Entity

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### ABSTRACT

*Appendix is a small worm like vestigial organ attached to the colon when inflamed due to any cause leads to Appendicitis and it is the most common surgical emergency presenting to the emergency room<sup>[1]</sup> peak incidence between 10 and 30 years of age<sup>[2]</sup>. It can occur due to a variety of causes but appendicitis caused by Enterobius vermicularis is very rare only around 200 cases of the same have been reported worldwide. Though the worm can be present in the appendix it may not always lead to appendicitis. Postoperatively patient should be treated with anti-helminthic drugs*

**Keywords:** Acute Appendicitis, Pinworm, Enterobius Vermicularis, Appendicectomy.

### Introduction

Appendicitis occurs due to various causes Obstruction of the lumen being the most common cause.<sup>[3]</sup> inspissated stool (fecolith or appendicolith), lymphoid hyperplasia, vegetable matter or seeds, very rarely by parasites, or a neoplasm.<sup>[4]</sup> Enterobius vermicularis is the most common parasite to infest the appendix but very rarely it can cause appendicitis. Mostly seen in children and in individuals with poor hygiene. Generally these are asymptomatic but most commonly present with history of pruritis ani.

### Case report

We present a case of 18 year old male who presented to us with complaints of pain in right iliac fossa with history of fever since 2 days

no history of vomiting No significant surgical, medical, family history was found. With no drug allergies Patient was febrile and presented with tenderness at the Mc Burney's point with positive Rovsing sign. The patient was evaluated by ultrasonography. Complete blood count. His total leucocyte count was significantly elevated and ultrasound imaging showed an inflamed appendix. Based on the clinical imaging and laboratory findings patient was confirmed to have appendicitis. Laparoscopic appendicectomy was performed under general anaesthesia. Intra-operatively the appendix was found to be inflamed but no perforation, when the appendix was cut multiple pin worms were seen moving out of the appendix.(figure 1). The specimen was quickly delivered and care was taken to meticulously

remove all the pin worms spilled into the peritoneal cavity. Post-operatively the patient recovered well and was treated with a course of anti-helminthic drugs

The histopathology report read as acute appendicitis with multiple intraluminal *Enterobius vermicularis* with ova of the parasite. The patient recovered well and was discharged there-after. With a course of anti-helminthic drugs to the patient and the family members. We retrospectively checked hospital records for past 10 years and found this to be the first case of inflamed appendix caused by *Enterobius vermicularis*.



**Figure 1**

### Discussion

Appendix is a vestigial organ found near the caecum which can get inflamed due to various causes and presents a surgical emergency. It is a tubular structure with a narrow lumen making it prone for closed loop obstruction. Very rarely it can be caused by parasites most commonly by pin worms<sup>[5]</sup>

*Enterobius vermicularis* affects about 200 million people worldwide in people with poor hygiene and more common in children though it can affect any age group. Humans are the only host. Most of the affected individuals are asymptomatic but commonly present with pruritis ani, generalised weakness and frequent colicky pain abdomen. It harbours the caecum, terminal ilium and ascending colon. It can also be found in the

appendix but rarely causes appendicitis due to obstruction of the lumen by the parasite or its ova. The ova are smooth elongated and transparent. A scotch tape test sample from the patient's anal region will show pin worms under a microscope. The worm adheres to the terminal ileum mucosa and multiples. Rarely in people with very heavy infestation can get extra intestinal symptoms due to direct inoculation by finger tips into the external auditory meatus, nasal mucosa.<sup>[6]</sup>

About 0.6 to 2 % of the Appendicectomy specimens have proved to be caused by *Enterobius vermicularis*.<sup>[7]</sup> About 15 to 30 % of the cases have shown inflamed appendix.<sup>[8]</sup> In children the diagnosis can be delayed as the omentum is not well developed hence cannot localise the inflammation so they may present with diffuse pain abdomen.<sup>[9]</sup>

Appendicectomy is the treatment of choice along with a course of anti-helminthic drugs like Albendazole, Mebendazole and pyrantel pamoate. The family members have to be treated with anti-helminthic drugs to prevent cross infection and advised to improve personnel hygiene.

### Conclusion

Appendicectomy is the most commonly performed emergency surgery. Appendicitis caused by *Enterobius vermicularis* is rare<sup>[10]</sup> but it should be kept in mind as a possible cause especially in children who present with atypical symptoms. These patients should be treated by surgery and anti-helminthic drugs.

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