

## WHIPWORM INFECTION FOUND IN THE SIGMOID COLON INSTEAD OF ITS USUAL SITE IN THE CAECUM AND RIGHT COLON WHILE DOING COLONOSCOPY IN OUR STUDY -AN EXTREMELY RARE FINDING.

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### ABSTRACT

**Objective:** To study the site of whipworm infection in the colon. **Methods:** A study of 72 patients who had undergone colonoscopy for a period of 5 years from November 2009 to October 2014 was carried out in order to find out the presence of parasitic worms during colonoscopy in these patients. **Results:** Out of these 72 patients, parasitic worm was found in the colon in only one patient. The parasitic worm found in this patient was identified as whipworm or trichuris trichiura by its characteristic whip like shape. It has a short posterior thick part resembling the short handle of the whip and a long, thin anterior part resembling the distal long, thin part of the whip. In our patient whipworm was found in the sigmoid colon which is the rare site to find the whipworm. **Conclusion:** Usually whipworms are most commonly found in the caecum and in the right colon. Only rarely whipworms are found in the left colon. But in our patient whipworm was found in the sigmoid colon which is the rare site to find the whipworm.

**KEYWORDS:** adult whipworm, trichuris trichiura, site of whipworm infection in the colon, colonoscopy.

### INTRODUCTION

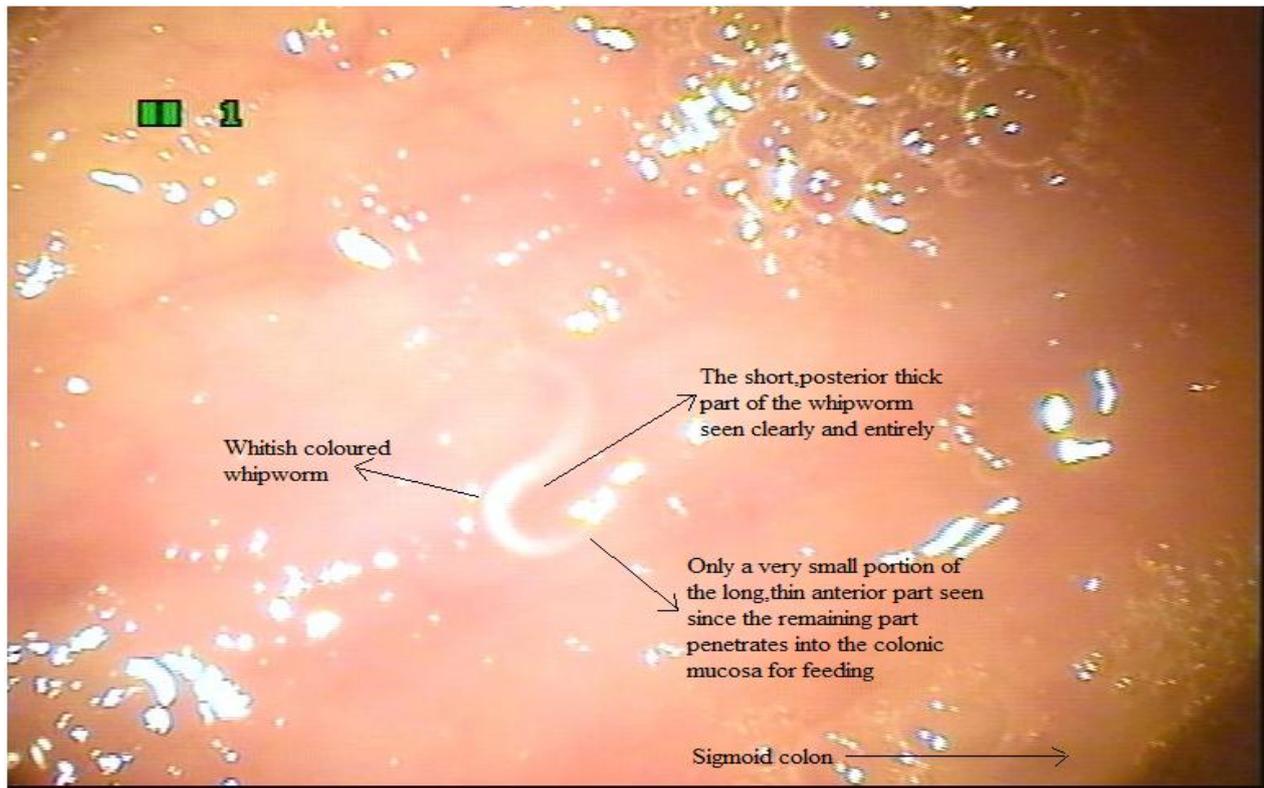
Whipworms are the most common nematodes or roundworms found in the large intestine of human beings while doing colonoscopy (2). Our patient was also found to have whipworm in the colon while doing colonoscopy. There has been also reports of finding whipworm in the large intestine of human beings while doing colonoscopy in many parts of the world.<sup>[1-14]</sup> Usually whipworms are most commonly found in the caecum and in the right colon.<sup>[2, 4]</sup> Only rarely whipworms are found in the left colon.<sup>[4]</sup> But in our patient whipworm was found in the sigmoid colon which is the rare site to find the whipworm.

### MATERIALS AND METHODS

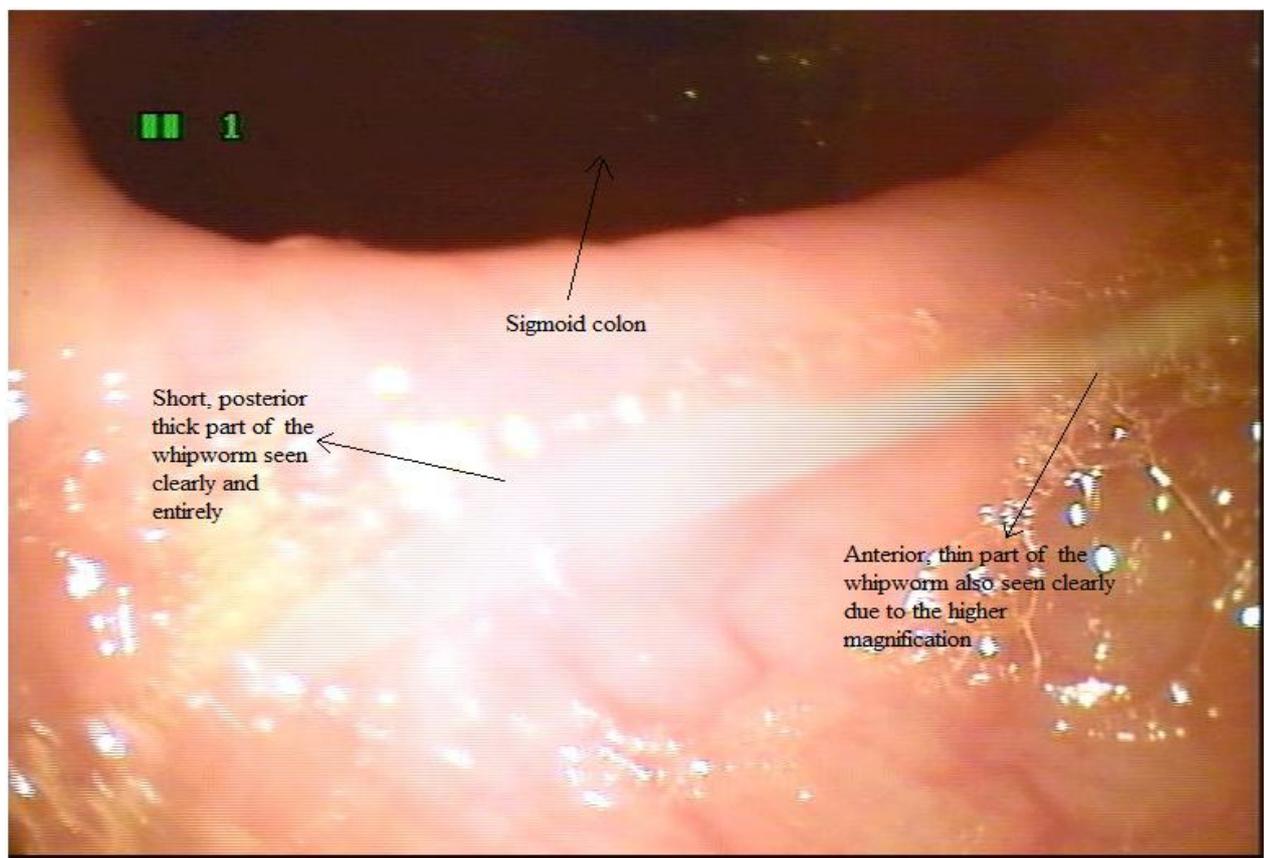
This study was conducted in the department of general surgery, Aarupadai Veedu Medical College And Hospital, Puducherry. A study of 72 patients who had undergone colonoscopy for a period of 5 years from November 2009 to October 2014 was carried out in order to find out the presence of parasitic worms during colonoscopy in these patients. In each of these patients, presence of any parasitic worm was carefully looked for during the procedure of colonoscopy and the colonoscopic pictures of each patient were carefully studied and analysed.

### RESULTS

Out of these 72 patients, parasitic worm was found in only one patient. The parasitic worm found in this patient was identified as whipworm or trichuris trichiura by its characteristic whip like shape. This patient was an eighty year old male patient and one adult whipworm was found in the sigmoid colon of this patient while doing colonoscopy which is the rare site to find the whipworm. The patient was treated with a single dose of 400mg of albendazole.



**Fig 1:** showing clearly and entirely only the short, posterior thick part of the whitish coloured whipworm and only a very small portion of the long, thin anterior part since the anterior part penetrates into the large intestinal wall for feeding purpose.



**Fig 2:** Magnified view showing clearly both the short, posterior thick part and also the anterior, thin part of the whipworm due to the higher magnification.

## DISCUSSION

### 1. Parasitic worms occurring in the large intestine of human beings

Whipworms are the most common nematodes or roundworms found in the large intestine of human beings while doing colonoscopy.<sup>[2]</sup> Our study has also shown the presence of whipworm in the large intestine or colon of a patient while doing colonoscopy. Only rarely intestinal helminths other than whipworm or trichuris trichiura were found in the large intestine of human beings while doing colonoscopy.

### 2. Size of whipworm and its life cycle

The male whipworm is 3 to 4.5 cm and the female whipworm is 3.5 to 5 cm in length.<sup>[11]</sup> Adults can live for years and deposit thousands of eggs per day.<sup>[8]</sup> Infective eggs are ingested from eating contaminated soil.<sup>[8,13]</sup> Upon ingestion the eggs hatch into larvae in the small intestine.<sup>[8,11,13,14]</sup> The larvae eventually migrate to the large intestine and complete maturation to adult worms in 1 to 3 months.<sup>[8, 11, 13,14]</sup>

### 3. Site of whipworm in the colon

Usually whipworms are most commonly found in the caecum and in the right colon.<sup>[2, 4]</sup> Only rarely whipworms are found in the left colon.<sup>[4]</sup> But in our patient whipworm was found in the sigmoid colon which is the rare site to find the whipworm. Only in one more study, adult whipworms were found in the sigmoid colon and also in the rectum while doing colonoscopy.<sup>[14]</sup> In another study, whipworm was found in the left colon in one patient.<sup>[4]</sup> In all the other studies, adult whipworms were found in the caecum<sup>[2,3,5,7,12,13,15]</sup> or in the ascending (right) colon.<sup>[2,3,5,11,12]</sup> while doing colonoscopy. Hence whipworm occurs only rarely in the sigmoid colon while doing colonoscopy.

### 4. Whitish colour of whipworm

Whipworms do not feed on blood and feeds only on the tissue secretions of the large intestinal wall. Whipworm is always whitish in colour<sup>[5]</sup> as it does not feed on blood (fig 1, 2).

### 5. Only a very small portion of the long anterior part of whipworm seen during colonoscopy

We can see only the short posterior thick part entirely in the lumen of the large intestine<sup>[13,14]</sup> but only a very small portion of the long, thin anterior part while doing colonoscopy since most of the anterior part penetrates into the large intestinal wall in order to feed on the tissue secretions of the large intestinal wall.<sup>[13,14]</sup> Hence in fig 1, we can see only the short posterior thick part of the whitish coloured whipworm entirely in the lumen of the sigmoid colon but only a very small portion of the long, thin anterior part since most of the anterior part penetrates into the large intestinal wall for feeding purpose. But in the highly magnified view in fig 2, we can see clearly both the short posterior thick part and also the anterior thin part clearly due to the higher magnification.

## CONCLUSION

1. Whipworms are the most common nematodes or roundworms found in the large intestine of human beings while doing colonoscopy.
2. Usually whipworms are most commonly found in the caecum and in the right colon.
3. Only rarely whipworms are found in the left colon. But in our patient whipworm was found in the sigmoid colon which is the rare site to find the whipworm.
4. Hence whipworms can rarely be found in the sigmoid colon while doing colonoscopy instead of its usual site in the caecum and right colon.

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