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Case Report

Ectopic *Enterobius vermicularis* in mesenteric lymph node in a child presenting with intestinal obstruction

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ABSTRACT

Enterobius vermicularis (pin worm) is rarely found outside the gastro-intestinal tract. We describe a case of extra-intestinal pinworm in a child who presented with intestinal obstruction and Meckel′s diverticulum was diagnosed. Resection and anastomosis was performed. Histopathological examination of one of mesenteric lymph nodes revealed ectopic *Entrobius vermicularis* worm surrounded by graulomatous reaction. It is likely that the pinworms obtained access via the lymphatic pathway. (Rawal Med J 2012;37:54-55).

INTRODUCTION

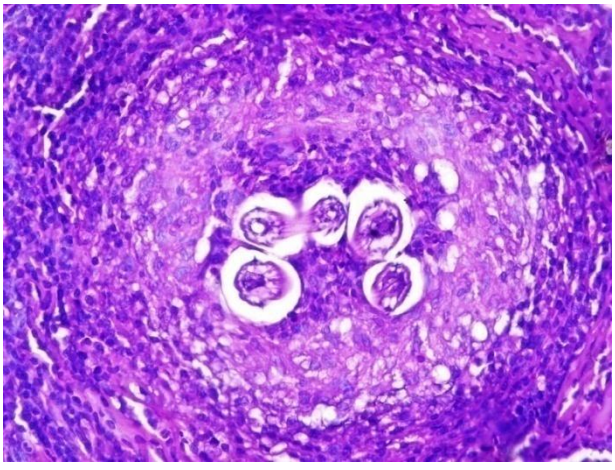
Enterobius vermicularis, a nematode with the broadest geographic range of any helminth,[1] is found in all groups in the community, especially in children. Most cases are asymptomatic. However, anal or vaginal pruritus,[2] due to mechanical irritation and allergic reactions, abdominal pain, constipation or diarrhea can occur.[3] The mean of infection is by ingesting the worm eggs. The adults live in the colon, where mating

occurs. At night the female migrates from the anus and releases thousands of fertilized eggs on the perianal skin. The eggs are then spread by the fecal-oral route to both the original host and new hosts the eggs are recovered by using the Scotchtape technique and can be observed under a microscope. E. vermicularis is easily spread throughout households.[4]

CASE PRESENTATION

A 3-year old boy was admitted to the Emergency Room complaining of bilious vomiting, colic, abdominal distention and rectal bleeding. Plain X-ray showed multiple air fluid levels and distended loops. On exploration, intestinal obstruction and Meckel′s diverticulum were diagnosed. Resection and anastomosis were performed at the same time. In the Pathology Department, during dissection of intestinal mesentery, two lymph nodes were found each measuring 1 cm in longest dimension.

Fig 1. Ectopic *Enterobius vermicularis* in a mesenteric lymph node showing granulomatous lymphadenitis, (Haematoxylin and eosin x400).



Histopathological examination of one of these lymph nodes revealed ectopic *Entrobius vermicularis* worm surrounded by graulomatous reaction formed mainly of

histeocytes, lymphocytes, plasma cells and occasional eosinophils giving the picture of granulomatous lymphadenitis (Fig 1).

DISCUSSION

In the past many cases of extra-intestinal localization of *E. vermicularis* have been reported, but occasionally the parasites can reach internal ectopic sites. Although *E. vermicularis* is usually a benign condition, it has the potential to cause life-threatening medical diseases. In addition to causing appendicitis,[5] these parasites have also been implicated in other gastrointestinal problems including intestinal obstruction, intestinal perforation, enterocolitis, and eosinophilic ileocolitis, hepatic infection, urinary tract infections, pelvic or peritoneal granulomas, epididymitis, sialadenitis, and salpingitis, even in macerated human embryo.[6] Ten case of pinworm in the cerebrospinal fluid have been reported.[7] Granulomas, sometimes with necrosis, may develop as a reaction to degenerating worms or eggs. The worms are 2-5 mm in length, white or ivory, and pointed at both ends; Morphologically, pinworms have prominent lateral alae with easily visible internal organs and eggs are ovoid with one flat side.[6]

Ectopic infections result from spread of larvae from the anal margin to a variety of ectopic sites. Although infrequent, enterobiasis in different ectopic sites has been encountered by many investigators.[8] A very unusual presentation of ectopic enterobiasis found in our patient could have been due to migration of the larvae through lymphatic route. It is also stated that pinworms are able to penetrate actively through the intact bowel wall.[9] Granulomas, may develop as a reaction to degenerating worms or eggs and have been described in the liver, omentum, peritoneum, appendix, anus, and colon in rare cases.[10] A similar case was also

reported by another investigator, who described an extra-intestinal pinworm in the mesenteric lymph nodes of a chimpanzee.[11]

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REFERENCES

1. Neva FA, Brown HW.: Basic Clinical Parasitology. 6th ed. Norwalk, CT, Appleton and Lange, 1994.

2. Gokalp A, Gultkin EY, Kirisci MF, Ozdamar S. Relation between Enterobius vermicularis infestation and dysuria, nocturia, enuresis, Nocturia and bacteriuria in primary school girl. Indian Pediatr 1991;18:948-50.

3. Silvio P, Francesco R. Enterobiasis in Ectopic Locations Mimicking Tumor-Like Lesions. Int J Microbiol 2009:doi:10.1155/2009/642481.

4. Petro M, Iavu K, Minocha A. Unusual endoscopic and microscopic view of enterobius vermicularis: a case report with a review of the Literature. South Med J 2005;98:927-9.

5. Wiebe BM. Appendicitis and Enterobius vermicularis. Scand J Gastroenterol 1991;26:336.

6. Quasem A, Salam A. Ectopic enterobiasis :a case report and review of literature. Pak J Med Sci 2007;23:785-7.

7. Maraghi S. Enterobius vermicularis in cerebrospinal fluid. Iranian Biomed J 1997;1:49-51.

8. McDonald GS, Hourthane DO. Ectopic Enterobius vermicularis. Gut 1972; 13:621-6.

9. Chandrasoma PT, Mendis KN. Enterobius vermicularis in ectopic site. Am J Trop Med Hyg 1977;26:644-9.

10. Lamps LW. Surgical pathology of the gastrointestinal system: bacterial, fungal, viral and parasitic infections. 1st ed. New York: Springer Science +BusinessMedia, LLC;2009.

11. Zhang GW, Ji XR, McManus DP. The presence of pinworms (Enterobius spp) in the mesenteric lymph nodes, liver and lungs of a chimpanzee, Pan troglodytes. J Helminthol 1990;64:29-34.