LETTER TO EDITOR (VIEWERS CHOICE)

## EXTRA-INTESTINAL ISOLATION OF ENTEROBIUS VERMICULARIS

*Minhajuddin Ahmed*, Manal Ashraf Ali**, Zeeshanuddin Ahmad****

Extra-intestinal manifestation of Enterobius vermicularis (EV) is very rare and can cause serious problems. A 6 year old female child presented with pruritis over genital region for 2 weeks. Examination findings were normal. On investigation, hemoglobin was 8.5gm% with hypochromic microcytic anemia and total leukocyte count was 20,800 cells/cumm (polymorph 70%, lymphocyte 35%, eosinophil 04%, monocyte 1%),. Urine examination showed microscopic hematuria and bacteriuria with whitish motile worm. Microscopic examination showed 6mm active motile female pinworm with no ova. Stool examination was normal. Ultrasonogram of the abdomen was normal. Patient was treated with mebendazole 100mg twice a day for three days and two more courses 3 weeks apart.

EV is an intestinal nematode which is commonly known as pinworm/threadworm/seatworm and also known as Oxyuris vermicularis. This disease is commonly seen in temperate and tropical regions among lower socioeconomic strata especially in children with inadequate personal and community hygiene. Nearly 200 million peoples are affected with this disease annually. (1) True incidence and prevalence is difficult to estimate due to environmental conditions. EV is a lumen dweller which resides in terminal ileum, caecum, right colon and migrates out from anus for oviposition. The disease is caused by ingestion of eggs through contaminated hand or food. After fertilization female worm migrates to the perianal region and cause intense pruritis. The skin irritation can lead to serious condition like eczematous dermatitis, hemorrhage or secondary bacterial infections (2) and also neurological symptoms like restlessness, irritability and insomnia. (3) Ectopic isolation of EV is rare and can cause granuloma of the uterus, ovary and fallopian tubes along with urinary tract infections. (2) Infection to other sites like lung, breast, liver and spleen has also been reported. (4) Ectopic sites with EV are seen usually in female genital tract whereas tubo-ovarian abscess and generalized peritonitis has been reported with appendicitis too. Dead parasite or eggs can lead to the formation of granuloma and abscesses in ectopic sites. (5) In our patient it seems EV has reached the urinary bladder through urethra when female worm was migrating and looking for small orifices in order to pass through it leading to urinary tract infection. Treatment with anti-helminthic drugs including mebendazole, albendazole or pyrantel palmoate is advisable.

**Funding :** None

**Conflict of Interest :** None

**References :**

1. Gulnaz C, Nizami D. The relation between enterobius vermicularis infection and nocturnal enuresis, Eur J Gen Med 2006; 3(1):16-20
2. Baver S, Koff SA, Jayanthi VR, Campells. Voiding Dysfunction in children: Neurogenic and Non-Neurogenic. In Walsh, Ratik, Vaugen, Wein: Campells Urology 8th ed. Saunders Philadelphia, P 2261-83.
3. Kang S, Jeon HK, Eom KS, Parl JK. Egg positive rate of Enterobius vermicularis among preschool children in Cheongju, Chungcheongbuk-do, Korea. Korean J Parasitol.; 2006;44:247-249.
4. Ng YW, Ng SB, Low JJ. Enterobius vermicularis infestation of the endometrium - a cause of menstrual irregularity and review of literature. Ann Acad Med Singapore. 2011;40(11):514-5
5. Carmen C, Babak JZ. Enterobius vermicularis (PINWORMS) infection and enuresis (Bedwetting) case report. Sc Parasit. 2009; 1-2:79-81.

**From:** *Department of Pediatrics, Chirayu Medical College and Hospital, Bhopal, MP, India, ** Department of Pathology, RKDF Medical College, Bhopal, MP, *** Department of Surgery, Chirayu Medical College and Hospital, Bhopal, MP, India.

**Address for Correspondence:** Dr Minhajuddin Ahmed, Department of Pediatrics, Assistant Professor, Chirayu Medical College and Hospital, Bhopal MP, India.

**Email :** minzahmad@yahoo.co.in

**DOI :** 10.7199/ped.oncall.2017.5