ENTEROBIASIS: PREVALENCE, CLINICAL COURSE IN CHILDREN, AND SPECIFIC FEATURES OF TREATMENT

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Received: 28.11.2025
Revised: 29.11.2025
Accepted: 30.11.2025
Keywords:
Enterobiasis, children, Enterobius vermicularis, clinical manifestations, hygiene, treatment, prevention, mebendazole, albendazole, pyrantel pamoate.

Abstract. This article highlights the prevalence of the parasitic disease enterobiasis among children, its age-related clinical course, and specific features of treatment methods. The main causative agent of enterobiasis is Enterobius vermicularis, which spreads rapidly, especially among children aged 3–10 years, due to poor adherence to sanitary and hygienic practices. The article analyzes the clinical manifestations in various age groups, including perianal itching, insomnia, irritability, and decreased learning ability. It also compares the efficacy of anthelmintic drugs such as mebendazole, albendazole, and pyrantel pamoate. In addition to treatment, the necessity of hygiene measures and simultaneous treatment of family members is emphasized. As preventive measures, personal hygiene compliance and conducting sanitary-educational campaigns in educational institutions are noted as essential for preventing enterobiasis.

Introduction Enterobiasis is a widespread intestinal parasitic disease in humans caused by *Enterobius vermicularis*. It predominantly affects children and is closely associated with violations of personal hygiene rules. The disease is most common among children aged 3–10 years. At this age, children spend a significant amount of time in kindergartens and schools, where close contact and poor hygiene habits contribute to rapid transmission.

In the 3–5 age group, infection spreads quickly due to poor hygiene. In the 6–10 age group, transmission continues mainly through school environments. Among children older than 11 years, the incidence decreases as personal hygiene habits improve.

Enterobiasis in children manifests with the following clinical symptoms:

- **Perianal itching** – the most common and characteristic symptom;
- **Sleep disturbances** caused by itching, leading to irritability and restlessness;
- **Redness and inflammation** around the anus;
- **Digestive disturbances** such as occasional diarrhea or constipation, sometimes accompanied by abdominal pain and fatigue.

Age-related characteristics of clinical symptoms:

Age group	Specific clinical features
3–5 years	Pronounced itching, insomnia, and emotional restlessness are common.
6–10 years	Itching persists; attention span and learning ability may decrease.
11 years and older	Symptoms are mild or may be asymptomatic.

The main goal of effective enterobiasis treatment is to completely eliminate *Enterobius vermicularis* (pinworms) from the body and prevent reinfection.

Alongside anthelmintic therapy, strict adherence to hygienic measures is of great importance.

Commonly used drugs and their efficacy:

Drug	Dosage	Efficacy
Mebendazole (Vermox)	Single dose of 100 mg or 100 mg/day for 3 days	One of the most effective drugs against enterobiasis. It disrupts the parasite's microtubular system, impairs energy metabolism, and leads to parasite death. Suitable for both children and adults. Due to reinfection risk, treatment is repeated after 2 weeks.
Albendazole (Zentel)	Single 400 mg dose or 200 mg/day for 5 days	A broad-spectrum anthelmintic agent effective against multiple helminth infections. Highly effective but relatively more expensive. A repeat dose is recommended after 2 weeks.
Pyrantel pamoate	10–11 mg/kg single dose (after meals)	Acts as a neuromuscular blocker, paralyzing worms and facilitating their expulsion. Safe and well tolerated in children. In some cases, treatment is repeated after 10–14 days.

Clinical observations show that these drugs can eliminate up to 90–95% of enterobiasis cases. However, since the risk of reinfection remains high, relying solely on medication is ineffective. Therefore, simultaneous treatment of all family members and strict hygiene measures (regular handwashing, trimming nails,

maintaining cleanliness, changing and ironing underwear and bedding daily) are mandatory.

After treatment, it is also essential to strengthen sanitary control in kindergartens and schools, conduct regular medical screenings of children, and perform follow-up perianal swab tests to monitor infection status.

Studies indicate that when combination therapy with mebendazole and albendazole is used, clinical symptoms disappear within 3–5 days, and parasites are completely eradicated within a week. However, if hygiene is neglected, reinfection can occur in 15–20% of cases. Thus, the effectiveness of enterobiasis treatment depends not only on medication but also on the population's hygiene awareness, sanitary conditions in educational institutions, and preventive efforts.

Conclusion Enterobiasis is a common parasitic disease affecting a large portion of the global population, particularly among children. Its spread is closely linked to inadequate hygiene practices. The disease is most prevalent among children aged 3–10 years, as they spend much time in collective settings such as kindergartens and schools and often neglect personal hygiene. Symptoms like itching and sleep disturbances negatively affect children's physical and psychological health, while in school-aged children, it may impair concentration and learning ability.Effective anthelmintic drugs such as mebendazole, albendazole, and pyrantel pamoate are used for treatment. To prevent reinfection, repeated dosing and strict adherence to hygiene rules are crucial. Simultaneous treatment of all family members further helps control and stop the spread of infection. Prevention remains the most effective strategy against enterobiasis. Teaching children personal hygiene habits — such as regular handwashing, nail trimming, daily bathing, and changing clothes — plays a vital role in disease prevention. Sanitary education and monitoring in schools and kindergartens are also essential. Because the disease can sometimes present with mild or asymptomatic forms, delayed diagnosis may hinder effective treatment. Therefore, when symptoms like perianal itching, irritability, or insomnia are observed in children, prompt medical examination and treatment are necessary. A comprehensive approach combining effective drug therapy, hygiene measures, and public health education is key to reducing the prevalence of enterobiasis and protecting children's health.

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