

Intestinal Obstruction Following Inappropriate Anthelmintic Use

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Introduction

Ascariasis is one of the most cosmopolitan intestinal parasite infections and can be found in inhospitable regions inhabited by human beings, but its highest prevalence is observed in the tropical and subtropical areas.⁸

Excessive or poorly timed administration of anthelmintic medications in patients with a heavy burden of *Ascaris lumbricoides* may precipitate or aggravate acute mechanical intestinal obstruction by immobilizing a large number of worms, which can subsequently aggregate into an obstructing intraluminal bolus. Anthelmintic treatment has been reported as a potential risk factor for intestinal obstruction in children with heavy *Ascaris* infestation.¹

When individuals—predominantly young children in endemic, low-resource settings—harbor a high parasite load, administration of anthelmintic drugs such as mebendazole may result in immobilization of the worms. Rather than being eliminated smoothly, the immobilized worms may aggregate and form an obstructing mass within the intestinal lumen, particularly in the distal ileum or near the ileocecal region.^{1,2} Therefore, anthelmintic treatment should be used cautiously in children presenting with abdominal pain, vomiting, abdominal distension, or features suggestive of subacute intestinal obstruction.

Clinical Presentation and Diagnosis

Patients with *Ascaris*-related intestinal obstruction typically present with acute colicky abdominal pain, persistent vomiting, abdominal distension, and constipation or obstipation. In some cases, patients may vomit or pass live worms.^{2,3} Plain abdominal radiography may demonstrate dilated small-bowel loops and multiple air-fluid levels.

Ultrasonography can provide additional diagnostic information and may demonstrate characteristic intraluminal echogenic structures corresponding to coiled *Ascaris* worms.^{3,4}

The clinical diagnosis should therefore be based on a combination of symptoms, physical examination, epidemiological history, and appropriate imaging. Particular attention should be given to children from endemic areas who have a history of recent deworming and subsequently develop symptoms suggestive of intestinal obstruction.^{1,4}

Management and Prevention

Initial management of intestinal obstruction due to *Ascaris* should focus on stabilization, including bowel rest with nil per os (NPO), nasogastric decompression when indicated, intravenous fluid and electrolyte replacement, and close clinical monitoring.^{2,5} Conservative management may be successful in selected patients without evidence of complete obstruction, bowel ischemia, perforation, or peritonitis.

However, patients who develop complete mechanical obstruction, persistent obstruction despite conservative treatment, bowel ischemia, gangrene, perforation, or peritonitis require prompt surgical intervention. Surgical options may include manipulation or milking of the worm bolus into the colon, enterotomy with removal of the worms, and intestinal resection when nonviable or perforated bowel is present.^{5,6}

Prevention remains an essential component of reducing morbidity associated with *Ascaris* infection. Deworming programs should be accompanied by appropriate clinical assessment, particularly in symptomatic children who may already have a heavy parasite burden or features suggestive of intestinal obstruction. Long-term prevention

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depends on regular access to safe water, adequate sanitation, appropriate disposal of human feces, hand hygiene, and sustained community-based control of soil-transmitted helminth infections.⁷

Conclusion

Clinicians should exercise caution when prescribing anthelmintic therapy to children with heavy *Ascaris lumbricoides* infestation who present with abdominal symptoms suggestive of subacute or evolving intestinal obstruction. A careful clinical assessment before treatment is important to identify patients who may require urgent observation, imaging, or surgical evaluation.^{1,2}

Early recognition and appropriate management of *Ascaris*-related intestinal obstruction, together with effective deworming strategies and sustained improvements in sanitation and hygiene, are essential for reducing morbidity and mortality in endemic regions.^{4,7}

References

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