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Editorial

Giardiasis: A Neglected Disease

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Intestinal infestation with the protozoa, *Lamblia giardia*, occurs on a large scale globally, more so in the low-income communities [1]. It constitutes an important cause of morbidity, especially in children. Yet, it has remained a relatively neglected disease [1-3].

No age is a bar. Often, this may be an asymptomatic infection though standing good chance of becoming symptomatic sooner or later. Common manifestations of giardiasis in children include chronic/recurrent diarrhea, abdominal discomfort and distension, failure to thrive and often poor appetite.

Infection occurs by consumption of contaminated food or water, the infestation being more common in immunocompromised subjects in whom it may be refractory to usual therapy. Hand-to-mouth transmission may also occur.

Common risk factors for *L. giardia* infection include poor faeco-oral hygiene, Immunodeficiency, Travel to endemic areas, contaminated water/food, recreational water swallowing, child care and institutional settings, infected food and food handlers, achlorhydria, gastric surgery and unusual sexual practices.

Diagnosis is established by demonstration of cysts or trophozoites in stools or in endoscopic small intestinal biopsy.

A single stool examination may not be sufficient in the wake of *L. giardia* cysts/trophozoites passing out intermittently. At least 3 tests (at times, up to 6 tests) may be needed to enhance the sensitivity of microscopy. This can be done daily or on alternate days. Recently, immunodiagnosis kits, bypassing microscopy, have become available. Direct florescent antibody (DFA) staining and real time PCR have been found to be most sensitive. These may be resorted to in case of negative reports from microscopic examination. Additionally, total immunoglobulins, including IgA, should be evaluated if immunodeficiency is suspected [4].

On an average, incubation period is 7 - 10 days, with a variation from 3 to 25 days or longer. Two types are recognized.: acute and chronic [2,3]. Acute giardiasis is characterised by sudden onset of acute, watery diarrhoea that occasionally becomes bloody (dysentery-like) with abdominal distension, flatulence and cramps, nausea, vomiting, and weakness. Acute giardiasis generally resolves in 1 to 4 weeks, but may persist for months, leading to malabsorption and malnutrition.

Chronic giardiasis manifests as persistent, recurrent or chronic diarrhea, abdominal discomfort malabsorption and weight loss/ failure to thrive. In some instances, there may be alternating constipation and diarrhoea. Massive infection over prolonged period tends to cause insult to the small intestinal epithelium, resulting in malabsorption that manifests as steatorrhoea, micronutrient deficiencies and protein-losing enteropathy. Other manifestations include aphthous ulcers in oral mucosa, urticaria and arthralgia.

Over the decades, recommended antigioardial drugs have been metronidazole (the mainstay over past quite a few decades), tinidazole, ornidazole, furazolidone, and, more recently, albendazole [5,6]. Earlier, mepacrine (quinacrine) was employed. Paromomycin is the only drug that can be used during pregnancy for giardiasis. Now, nitazoxanide, a broad-spectrum antiparastic agent with synthesis based on structure of niclosamide, has proved to be quite effective [7].

The increasing number of reports of refractory cases with existing antigiardial agents, has raised concern and led to a search for other compounds. Undoubtedly, identification of new antigiardial molecules is an important consideration for the present and the future. Nonetheless, maintaining the continuity of the existing drugs is the most cost-effective measure [8].

Prevention revolves around recognition of risk factors, personal hygiene, water and food hygiene, and case finding and appropriate treatment.

All in all, it is felt that giardiasis should be excluded in all young children and adolescents with protracted gastrointestinal symptoms such as persistent, chronic and recurrent diarrhoeas, chronic and/or abdominal pain, especially when accompanied by growth failure/ weight loss.

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