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REVIEW ARTICLE

Small intestinal bacterial overgrowth in children: An expert review by the ESPGHAN Gastroenterology Committee



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Abstract

The aim of this review is to summarize the prevalence, etiology, pathogenesis, diagnosis, and treatments currently available for small intestinal bacterial overgrowth (SIBO) in children. SIBO is a clinical entity characterized by the presence of an excessive number of bacteria in the small bowel leading to several nonspecific gastrointestinal symptoms due to malabsorption and malnutrition, such as bloating, flatulence, belching, diarrhea, abdominal pain, nausea, steatorrhea, fatigue and stunted growth. Initially thought to develop specifically in the context of abnormal or postsurgical gastrointestinal anatomy, it has then been recognized that it can be associated with other nonsurgical conditions, such as gastrointestinal dysmotility, disorders of gut–brain interactions and chronic use of drugs. The uncertainty regarding the exact cut-off of excessive number of bacteria in the small bowel has led to the absence of a universally accepted definition of SIBO making well-designed research to assess the best diagnostic and therapeutic approaches challenging. Current available diagnostic tools includes duodenal/jejunal aspirate with culture and hydrogen breath tests, which all have some limitations and pitfalls that prevent accurate sampling. The treatment goal should be to treat the underlying causes, restore the healthy intestinal microflora, relieve the symptoms and address the associated complications. The use of antibiotics represents the treatment cornerstone. However, they are commonly used despite the scarce published evidence and the

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approaches for SIBO are emerging and may facilitate further research.

Highlights

What is Known

Small intestinal bacterial overgrowth (SIBO) is a frequent but under-diagnosed clinical entity due to its nonspecific signs and symptoms and the difficulty to confirm the diagnosis with current available diagnostic tools.

Careful evaluation and management of the predisposing factors for SIBO is crucial to reduce its recurrence.

Antibiotics are the treatment cornerstone. However, limited data are available regarding the best therapeutic regimen.

What is New

Novel diagnostic approaches for SIBO are emerging and may be promising. They could facilitate clinical trials to explore efficacy of therapies for SIBO.

Given the lack of evidence and the scarce current literature, suggested antibiotic regimens for treatment of SIBO are provided in this review only based on expert opinion.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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