

Celiac disease: Pathogenesis, diagnosis, therapie.

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Introduction

This article explores the evolving understanding of the gut microbiome's role in celiac disease, detailing how dysbiosis contributes to disease onset and progression. It highlights recent discoveries and discusses the challenges in developing microbiome-targeted therapeutic interventions[1].

This publication provides the updated European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) guidelines for diagnosing celiac disease in children. It emphasizes revised serological testing protocols and conditions under which a biopsy-sparing approach can be considered[2].

Here's a look at the emerging therapeutic strategies for celiac disease that extend beyond the traditional gluten-free diet. The article delves into promising investigational treatments, including enzyme therapies, tight junction modulators, and immunomodulatory drugs, aimed at addressing ongoing challenges[3].

This piece explores the complex interplay of genetic and environmental factors in celiac disease pathogenesis. It discusses the critical role of HLA-DQ2/DQ8 genes, environmental triggers like infections and early feeding practices, and how these elements converge to initiate the autoimmune response[4].

This systematic review and meta-analysis offers a comprehensive update on the global prevalence of celiac disease. The findings reveal significant geographical and population-based variations, highlighting the increasing recognition of the disease worldwide[5].

This article discusses the unique challenges encountered in managing celiac disease in pediatric populations. It covers issues such as ensuring strict adherence to a gluten-free diet, identifying and addressing nutritional deficiencies, and supporting the psychological well-being of affected children and their families[6].

The study investigates how adherence to a gluten-free diet impacts the health-related quality of life for individuals with celiac disease. It highlights the direct correlation between strict dietary compliance and improved physical and mental well-being, reinforcing the importance of sustained adherence[7].

This review delves into the frequent co-occurrence of celiac disease with other autoimmune conditions, such as Type 1 Diabetes, autoimmune thyroid disease, and autoimmune liver disease. It examines the shared genetic predispositions and immunological pathways that contribute to these associations[8].

Here's an updated review on refractory celiac disease (RCD), a rare and severe form that doesn't respond to a strict gluten-free diet. The article outlines the diagnostic criteria, classification (Type I and Type II), current treatment strategies, and the prognosis for patients with RCD[9].

This article discusses the current state and future perspectives of population screening for celiac disease. It critically evaluates the arguments for and against widespread screening, considering factors like diagnostic accuracy, cost-effectiveness, ethical implications, and the potential benefits of early detection[10].

Conclusion

Celiac disease, a significant autoimmune condition, is increasingly understood through its connection to gut microbiome dysbiosis, which contributes to disease onset and progression. This understanding highlights challenges in developing targeted therapeutic interventions [1]. The disease's pathogenesis is deeply rooted in genetic factors, specifically HLA-DQ2/DQ8 genes, and environmental triggers such as infections and early feeding practices, all converging to initiate the autoimmune response [4]. There's also a recognized frequent co-occurrence with other autoimmune conditions like Type 1 Diabetes, autoimmune thyroid, and autoimmune liver diseases, linked by shared genetic and immunological pathways [8].

Diagnostic guidelines, especially for children, have been updated by ESPGHAN, emphasizing revised serological testing and conditions for biopsy-sparing approaches [2]. The global prevalence of celiac disease is showing significant geographical and population-based variations, underscoring its increasing recognition worldwide [5]. Managing the condition, particularly in pediatric populations, presents unique challenges, including ensuring strict gluten-free diet adherence, addressing nutritional deficiencies, and supporting

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psychological well-being [6]. Adherence to a gluten-free diet directly impacts health-related quality of life, improving physical and mental well-being [7]. For severe cases not responding to diet, refractory celiac disease (RCD) has specific diagnostic criteria, classification, treatment strategies, and prognosis [9]. Research is also focused on novel therapeutic strategies beyond diet, such as enzyme therapies, tight junction modulators, and immunomodulatory drugs [3]. Furthermore, there's ongoing discussion about the benefits, accuracy, cost-effectiveness, and ethical implications of population screening for celiac disease [10].

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