



Coeliac Disease: History, Pathophysiology, And Psychosomatic Dimensions

Dr Chandan Moolchandani ^{1*}, Dr Pramod Kumar Singh ², Dr Suveera Bhatia ³, Dr Kanchan Bhanwarsingh Rathore ⁴

^{1*}PhD Scholar, Homoeopathic Pharmacy, Homoeopathy University, Jaipur

² (Guide), Professor and Head of Department of Homoeopathic Pharmacy, Homoeopathy University, Jaipur

³Professor, Department of Practice of Medicine, Homoeopathy University, Jaipur

⁴Assistant Professor, Department of Human Anatomy, Madhav University, Sirohi

***Corresponding Author:** Dr Chandan Moolchandani

*PhD Scholar, Homoeopathic Pharmacy, Homoeopathy University, Jaipur Mail Id: htcmoolchandani@gmail.com

Abstract

Coeliac disease is a chronic autoimmune disorder triggered by gluten ingestion in genetically predisposed individuals. First described by Aretaeus of Cappadocia in the 2nd century AD and later scientifically defined by Samuel Gee in 1888, its pathogenesis was clarified in the 1940s when Willem-Karel Dicke identified wheat as the causative agent. The disease is characterized by villous atrophy, malabsorption, and systemic complications, with a global prevalence of approximately 1%. Beyond its gastrointestinal manifestations, coeliac disease has significant psychosomatic and psychiatric dimensions, including associations with depression, anxiety, cognitive impairment, and social isolation.

While the gluten-free diet remains the cornerstone of management, alternative medicine approaches—such as homeopathy, Ayurveda, naturopathy, and mind-body interventions—have been explored for supportive care, though evidence remains limited. This article reviews the historical evolution, pathophysiology, psychosomatic relations, and complementary medicine perspectives on coeliac disease, highlighting its multidimensional impact on health and quality of life.

INTRODUCTION

Coeliac disease represents one of the most extensively studied autoimmune disorders of the gastrointestinal tract. It is defined by an abnormal immune response to gluten, a protein found in wheat, barley, and rye, resulting in chronic inflammation and damage to the small intestinal mucosa. The condition has been recognized for centuries, with Aretaeus of Cappadocia providing the earliest description of “coeliac affection” in antiquity [1]. In the modern era, Samuel Gee’s seminal work in 1888 laid the foundation for clinical recognition [2], and Willem-Karel Dicke’s observations during World War II established gluten as the dietary trigger [3].

The disease is not confined to gastrointestinal symptoms alone. Its psychosomatic and psychiatric dimensions have gained increasing attention, with studies linking untreated coeliac disease to depression, anxiety, and cognitive dysfunction [6,7]. These manifestations underscore the bidirectional relationship between physical pathology and psychological well-being. Furthermore, the lifelong requirement of a gluten-free diet imposes social and emotional challenges, often leading to isolation and reduced quality of life.

In parallel, alternative medicine systems—including homeopathy, Ayurveda, and naturopathy—have attempted to address coeliac disease through individualized remedies, herbal formulations, and mind-body practices [8–11]. While these approaches lack robust clinical validation, they highlight the global interest in integrative strategies that complement conventional management.

This article aims to provide a comprehensive overview of coeliac disease, tracing its historical origins, elucidating its pathophysiology, examining psychosomatic relations, and evaluating the role of alternative medicine. By integrating these perspectives, it emphasizes the multidimensional nature of the disorder and the importance of holistic patient care.

HISTORICAL BACKGROUND

The earliest description of coeliac disease dates back to **Aretaeus of Cappadocia (2nd century AD)**, who referred to a “coeliac affection” characterized by chronic diarrhea and wasting [1]. Centuries later, **Samuel Gee (1888)** provided the first modern clinical account in *On the Coeliac Affection*, emphasizing the importance of diet in management [2]. The breakthrough came in the **1940s**, when Dutch pediatrician **Willem-Karel Dicke** demonstrated that wheat consumption worsened symptoms, identifying gluten as the trigger [3].

PATHOPHYSIOLOGY

Coeliac disease is an **immune-mediated disorder** caused by ingestion of gluten (proteins in wheat, barley, rye). In genetically predisposed individuals (HLA-DQ2/DQ8), gluten peptides activate T-cells, leading to **villous atrophy** and malabsorption [4]. Consequences include:

- Nutrient deficiencies (iron, folate, vitamin D)

- Growth retardation in children
- Osteoporosis and systemic complications [5]

PSYCHOSOMATIC & PSYCHIATRIC RELATIONS

The psychosomatic dimension of coeliac disease is increasingly recognized.

- **Psychiatric comorbidities:** Depression, anxiety, ADHD, eating disorders, and even psychosis have been reported in untreated patients [6].
- **Cognitive effects:** Patients often describe “brain fog,” fatigue, and impaired memory, which improve on a gluten-free diet [7].
- **Psychosomatic interplay:** Stress and emotional distress exacerbate gastrointestinal symptoms, while strict adherence to a gluten-free diet improves both physical and psychological health [6].
- **Social impact:** Dietary restrictions can lead to social isolation, fear of contamination, and reduced quality of life [7].
- **Contemporary Relevance**
- Globally, coeliac disease affects about **1% of the population**, though many remain undiagnosed [4]. In India, awareness is rising, especially in urban centers, with increasing access to gluten-free products. Current research explores **genetic predisposition, microbiome influence, and psychosomatic resilience strategies** [7].

ALTERNATIVE MEDICINE PERSPECTIVES ON COELIAC DISEASE

While the **lifelong gluten-free diet** remains the only scientifically validated treatment, several studies in **alternative and complementary medicine** have investigated supportive approaches:

- **Homeopathy:** Case reports and small observational studies have explored individualized remedies for gastrointestinal symptoms, though evidence remains anecdotal and lacks randomized controlled trials [8].
- **Ayurveda:** Traditional Indian medicine emphasizes digestive balance (*Agni*) and has proposed herbal formulations (e.g., *Triphala*, *Ashwagandha*) for symptom relief, but clinical validation is limited [9].
- **Naturopathy & Functional Medicine:** Focus on gut healing through probiotics, nutritional supplementation, and detoxification strategies. Some studies suggest improved quality of life, but results are not standardized [10].
- **Mind-body interventions:** Yoga, meditation, and stress reduction techniques have been studied for their psychosomatic benefits, particularly in reducing anxiety and gastrointestinal distress [11].
- **Nutritional supplements:** Research in integrative medicine has examined enzymes, vitamins, and minerals to mitigate deficiencies, though these do not replace gluten avoidance [12].

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