CASE REPORT

Personalised dietary interventions: A successful approach to chronic GERD management

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Abstract

This case report highlights effective management of chronic Gastroesophageal Reflux Disease (GERD) through a personalised strategy utilising Food Allergy and Sensitivity Testing (FAST) at Infinite Wellness. The patient, burdened with persistent GERD symptoms despite conventional treatment, underwent FAST to identify specific dietary triggers contributing to his condition. Personalised modifications were implemented under the guidance of a dietitian. Within weeks, the patient experienced significant symptom relief, highlighting the efficacy of personalised diet plans. Retesting after six months showed sustained improvement in severity of symptoms and test results, indicating durability of dietary interventions. This case illustrates potential benefits of customised dietary strategies for comprehensive management of GERD. By addressing individual dietary triggers identified through FAST, clinicians can offer patients a targetted approach that complements or reduces reliance on pharmacological treatments. Such interventions improve symptom control and enhance patient's satisfaction and quality of life by addressing the root causes of GERD systematically.

Keywords: Gastroesophageal Reflux Disease, Food, Sensitivity, Diet.

DOI: https://doi.org/10.47391/JPMA.22513

Introduction

Gastroesophageal Reflux Disease (GERD) constitutes a prevalent gastrointestinal ailment characterised by the retrograde movement of gastric contents into the oesophagus, which precipitates symptoms including pyrosis, regurgitation, and thoracic discomfort.[1,2] This condition exerts a substantial influence on the overall quality of life and frequently necessitates prolonged therapeutic intervention. The standard treatment protocol predominantly incorporates high-potency acid suppressants, which are associated with potential long-term adverse effects.1 In conjunction with pharmacological therapy, modifications in lifestyle and dietary habits are integral to the effective management of GERD, wherein the recognition and elimination of food triggers are essential.[2] This case report exemplifies the successful management of chronic GERD through the implementation of a tailored dietary regimen based on the results of food allergy and sensitivity assessments.

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ORCID ID: 0009-0007-0734-7153

Submission completed: 22-11-2024 **1st Revision received:** 25-04-2025

Acceptance: 21-02-2026 **Last Revision received:** 20-02-2026

Case Report

The global prevalence of GERD varies widely, with estimates ranging from 5% to 25% across different regions.[3] A 55-year-old male presented at the Infinite Wellness Clinic, Karachi, on August 4, 2023, exhibiting chronic gastrointestinal disorders, hyperlipidaemia, and gastroesophageal reflux disease (GERD), despite extensive consultations spanning three decades. Symptoms included non-specific abdominal discomfort, bloating, dyspepsia, constipation, and episodes of epigastric burning. Prior evaluations had suggested the necessity of colonoscopy and endoscopy, which the patient refrained from undertaking due to associated discomfort. Diagnosis of Helicobacter pylori infection was confirmed through stool analyses on two separate occasions; however, adherence to treatment protocols was suboptimal due to adverse side effects.

The patient had a medical history of hyperlipidaemia necessitating prolonged administration of antihyperlipidaemic medication and had been using Omeprazole for over 25 years to alleviate GERD-related symptoms. In addition to gastrointestinal complaints, the patient denied the presence of significant comorbid conditions, including cardiovascular disease, diabetes mellitus, or neurological disorders.

The initial evaluation encompassed socio-demographic information, body mass index (BMI), dietary habits, exercise patterns, and a regimen of resistance training. Physical examination revealed no noteworthy abnormalities, and vital signs were within normal ranges. Assessment of the abdomen did not demonstrate tenderness or palpable masses, nor did it indicate any dietary deficiencies or systemic diseases. Pre-test evaluations focussed on fatigue levels, energy status, sleep patterns, and specific

gastrointestinal concerns, with the patient reporting normal fatigue, moderate to low energy, and satisfactory sleep quality. Nevertheless, persistent issues of bloating, diarrhoea, and constipation continued to be problematic.

The patient underwent Food Allergy and Sensitivity Testing (FAST) on August 10, 2023, revealing sensitivities to almond, Brazil nut, cashew, mustard seed, peanut, soybean, English walnut, broccoli, spinach, gluten (gliadin), malt, vanilla, candida, and yeast (S. cerevisiae). A personalised elimination diet was designed, based on the positive foods identified in the report, along with lifestyle modification recommendations such as exercise, yoga, and deep breathing.[4,5] Re-testing on March 12, 2024, showed overall improvement, with mild persistence of sensitivities to almond, cashew, peanut, gluten (gliadin), malt, candida, and yeast (S. cerevisiae). Additionally, new mild sensitivities to rice, cocoa, and mushrooms were noted.

Despite adherence to the diet plan, the patient continued using Omeprazole due to initial challenges in discontinuation. Guidance on alternative food choices and meal planning was provided to ensure adequate nutrition, while avoiding allergenic and sensitive foods. Regular follow-up appointments monitored progress and provided ongoing support. During this period, the patient developed a low-grade fever and sought medical attention, which inadvertently exacerbated abdominal symptoms due to prescribed antibiotics.

Following the completion of the antibiotic regimen, the patient exhibited exacerbated symptoms of dyspepsia, flatulence, and constipation. Subsequently, the detection of a positive stool H. pylori antigen assay necessitated the initiation of a third-line pharmacological regimen (Levofloxacin 250 mg BID, Doxycycline 100 mg daily, Nitazoxanide 500 mg BID, and Esomeprazole 40 mg BID for a duration of two weeks) under the supervision of a gastroenterologist. Upon the conclusion of this treatment and an additional six weeks of Omeprazole administration, the patient reported substantial improvement in symptoms, resulting in the complete discontinuation of Omeprazole without any recurrence of bloating or dyspepsia.

Four months post-treatment follow-up testing revealed significant enhancement in the patient's condition when compared to the initial results. The dietary regimen was modified accordingly, ensuring continued symptom resolution. Abdominal symptoms demonstrated an improvement of 80-85%, while epigastric pain showed a reduction of 80-90%. The initially prescribed herbal treatments were amended, leading to the cessation of bismuth and a reduction in the dosage of DeGlycyrrhizinate Licorice (DGL). Furthermore, the cessation of cholesterol-lowering medication facilitated improved daily functioning.

Discussion

This case underscores the efficacy of personalised dietary interventions in managing chronic GERD by effectively identifying and avoiding trigger foods, thereby significantly improving symptoms that were previously resistant to conventional treatments. The sustained relief observed over a six-month period underscores the long-term benefits of tailored dietary modifications in GERD management. Integrating dietary interventions into treatment plans acknowledges the pivotal role of nutrition in gastrointestinal health and emphasises the inadequacy of generalised dietary advice in addressing individual sensitivities and triggers. Collaboration among healthcare providers, including dietitians, ensures comprehensive care and promotes sustained dietary adherence.

Personalised dietary interventions are increasingly recognised as integral to managing chronic GERD, although their specific efficacy can vary among individuals.[5,6] While weight loss is consistently beneficial, the precise influence of dietary components on GERD symptoms remains uncertain, with studies reporting mixed results.[7] The emergence of precision nutrition, which customises interventions based on genetic and metabolic profiles, offers promising avenues for enhancing the efficacy of obesity management.[8] This concept could potentially be applied to GERD management, considering the heterogeneity in response to dietary interventions observed in the literature.

Similarly, the potential application of artificial intelligence in creating personalised diet plans holds promise but requires further refinement.[9] Moreover, this case highlights the broader health benefits of dietary modifications beyond GERD management, such as improved overall health and reduced medication dependency, emphasising the interconnectedness between dietary habits and systemic well-being. Comprehensive and personalised dietary assessments are crucial for optimising patient outcomes across various health conditions.

Conclusion

Personalised dietary interventions, guided by FAST results, show promise in managing chronic GERD by identifying and avoiding trigger foods, thereby improving the patient's quality of life and offering an alternative to long-term pharmacotherapy. Collaborative efforts between healthcare providers are essential in implementing and sustaining dietary modifications for optimal patient outcomes. FAST-guided dietary interventions should be

tested in larger patient populations to determine their efficacy and processes. These findings endorse incorporating personalized diet plans into evidence-based GERD management guidelines for a holistic, patient-centred strategy. In summary, while the evidence for the efficacy of personalised dietary interventions in chronic GERD management is still evolving, the concept aligns with the broader trend towards individualised patient care. The potential systemic health benefits identified in this scenario suggest that personalized dietary interventions may play a larger role in managing related conditions, warranting further research.

Acknowledgement: Written and verbal informed consent were obtained from the patient for publication of this case report.

Disclaimer: None.

Conflict of interest: None.

Funding disclosure: None.

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Author Contribution:

SS: Concept, design, case identification, project leadership and final approval.
NJ: Drafting, organised its content critically, took responsibility and data interpretation.
MF: Literature review, compiled references and data interpretation.
FT: Data collection, acquisition, research conclusions and reviewed relevant and critical sections.