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Case Report

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Managing Anxiety through Nutritional and Lifestyle Psychiatry: A Case Report

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Abstract

Background: Mood disorders including anxiety are complex and multifactorial. Lifestyle changes caused by job-related or social stress can impact the severity of anxiety and overall quality of life. Currently, prescription drugs are the first course of treatment to manage anxiety disorders. While lifestyle interventions for anxiety treatment have demonstrated positive outcomes, the impact of personalized nutrition therapies is not as well documented in clinical care. In large part this is because Nutritional Psychiatry is a nascent field with few active clinical practices worldwide.

Case Description: A 32 year-old Asian American female presented with new onset anxiety and sought urgent medication management. Upon obtaining a comprehensive medical and psychiatric history, nutritional therapy and counseling was offered as a first line of care. A personalized nutritional psychiatry plan along with lifestyle intervention was created to include lower alcohol consumption, meal planning and healthy snacking, as well as sleep regulation.

Conclusion: This case report demonstrated the use of targeted nutritional psychiatry interventions in a consumer who did not need a pharmaceutical as the first line of therapy resulting in a marked improvement in the anxiety symptoms. It highlights that a comprehensive integrative and holistic approach may be a beneficial option for individuals with GAD.

Keywords: Anxiety; Mental illness; GAD; COVID-19.

INTRODUCTION

Anxiety disorders are the most common type of mental illness, and at the same time, are profoundly complex and multifactorial [1]. Globally, over 300 million people currently experience an anxiety disorder, which is an estimated 4% of the population. In 2021, The Lancet published a study estimating that the global prevalence of anxiety disorders increased by approximately 25% during the first year of the COVID-19 pandemic. This rise corresponds to an increase from about 298 million cases to 374 million cases worldwide [2].

Medications and psychotherapy, considered the standard treatments, are effective for only around half of patients, with just a quarter achieving full symptom relief [3]. The large global health burden, along with the subpar efficacy of current standard treatment approaches, underscores the need to develop both nutritional and lifestyle interventions to effectively manage anxiety. Along with medications, genetics, stress, microbiome dysbiosis, inflammation, and insulin resistance, have been attributed to the metabolic interplay involved in anxiety disorders [4–8]. Lifestyle factors are a key mediator of these metabolic disturbances. A limited number of randomized controlled trials (RCTs) have been conducted to explore the effects of dietary patterns on anxiety, and even among those, there is heterogeneity likely due to participants without clinical levels of anxiety [9].

In this paper, we present the case of a patient who experienced severe anxiety due to dramatic lifestyle changes and successfully managed her condition with dietary and lifestyle interventions along with conventional care (supportive psychotherapy).

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CASE PRESENTATION

The patient, a 32 year-old Asian American female (she/her) presented with symptoms of severe anxiety. The patient who had no notable past medical history or psychiatric history, reported an increasing level anxiety over the prior four months. It began with poor sleep and gradually grew to become debilitating over a four month period where she asked her primary care doctor for an urgent referral to see a psychiatrist for medication. During the initial consultation, the patient appeared anxious. She expressed concern about her inability to maintain her previously well-structured lifestyle due to a recent job promotion. which had spiraled into poor eating habits and significant disruptions to her routine. At first she was interested in a medication, but upon further discussion she became eager to explore a natural approach to managing her anxiety through nutritional psychiatry. She was concerned about the weight gain and libido lowering side effects she had read when exploring traditional psychopharmacological interventions online.

The patient had previously maintained a healthy and balanced lifestyle, which included regular exercise, walking her dog, preparing her own meals, and maintaining an active social life. She cooked most evenings and typically went out for dinner once or twice on weekends, accompanied by an occasional glass of wine. She had recently started dating and maintained healthy relationships with friends and family. The shift began when she received a wonderful promotion at work which highlighted the growing success of her early career. However, the promotion now required extensive travel— sometimes up to five hours of travel a day for seven days a week. This sudden change in her routine left her barely home and disrupted many of her healthy habits. Her dietary patterns deteriorated as she began to eat on the go, relying heavily on airport fast food and lounge selections, bar fridge snacks at hotels, and rich meals at restaurants for work-related networking events. She increased her alcohol consumption to keep up appearances with business and work associates, drinking 1-3 glasses of wine a night, which was a significant increase from her previous intake. She continued to use the hotel gyms to exercise so weight had not become an issue. However, she stopped her yoga and mindfulness practices as she traveled more and her sleep became disrupted.

Her diet, once filled with whole foods and healthy home-cooked meals, shifted to ultra-processed, nutrient-poor options. The patient noted feeling more anxious, sleep-deprived, and emotionally stressed. Her circadian rhythm was disrupted due to irregular travel and work hours, exacerbating her anxiety and leading to poor sleep quality. She began experiencing symptoms of dysbiosis and what was suspected gut inflammation, which is consistent with her drastic shift in diet and lifestyle.

After further interview and observation, the patient was diagnosed with Generalized Anxiety Disorder (GAD).

TREATMENT PLAN

The patient was initiated on low dose Zoloft as initial treatment for anxiety. Given the patient's understanding of her situation, she was also started on a nutritional psychiatry plan focused on reducing inflammation as her anxiety was consistent to be partially driven by poor metabolic health and inflammation due to her change in diet and lifestyle. The patient was highly motivated to make changes and work on improving her mental health through dietary modifications.

Meal planning and prep was reintegrated into her routine, focusing on whole foods such as vegetables, lean proteins, and nuts, but on the go when she arrived in a new city. She would make time to stop at a local supermarket and stock up on whole foods, some berries, nuts, hummus and plain filtered water for her room. She would request a small fridge for her room to store these. She avoided the ultra-processed options in airport lounges or hotel bar fridges, and instead ate what she had bought. This helped ensure she had healthy snacks on hand while traveling. To address inflammation, the patient incorporated anti-inflammatory foods, additional fiber, and paid attention to hydrating with water and cutting back on her wine consumption. She also started using protein powder a few times a week to make a morning shake on her travel days, ensuring she had a nutritious start to her day and was not hungry for ultra-processed airplane snacks and cookies.

When she reduced her alcohol intake, and instead opted for a mocktail that looked similar to what her colleagues were drinking, or a glass of white wine with ice when socializing with work associates. To make the reduction less noticeable due to social pressures, we suggested she add a twist of orange or other garnishes, giving the appearance of a cocktail. The patient incorporated practices to regulate her sleep cycle, including yoga, relaxation techniques, breathwork and the use of blue light blocking glasses. Sleep hygiene was emphasized to the patient to improve her circadian rhythm and overall well-being. She was also encouraged to spend about 10 minutes outside in daylight to allow for sun exposure prior to adding on her sunscreen. This also helped her vitamin D levels.

OUTCOME AND FOLLOW UP

Within the first few weeks, the patient reported noticeable improvements at first with her sleep and then with her anxiety and energy levels. By about two months of being very disciplined with these changes, she reported that she had returned to her usual self, feeling mentally sharper, emotionally balanced, and less anxious. Her shifted eating habits helped support her gut microbiome, and the inflammatory symptoms had subsided, leading to better overall well-being. After discussion, Zoloft was removed from the treatment plan and ongoing management was only diet and lifestyle-based.

DISCUSSION

Nutrition and diet are increasingly appreciated in literature as playing a key role in modulating symptoms in patients with anxiety, yet they remain an underutilized intervention in clinical settings. The multidirectional relationship between chronic inflammation, gut dysbiosis, and anxiety is shown in literature. Several studies show that patients suffering from a variety of anxiety disorders have high inflammatory markers [10-12], and showed dramatically decreased microbial richness and diversity [13]. Literature also shows the significant role of diet in lowering chronic inflammation and promoting the growth of a healthy gut microbiome, lowering symptoms of anxiety as well [14-16].

For treatment, the patient was engaged in a diet of "anti-anxiety" foods that included cruciferous vegetables, berries, nuts, seeds, legumes, leafy greens, fermented foods, whole grains, olive oil, and spices such as turmeric. These foods contain essential omega-3 fatty acids, fiber, micronutrients, and antioxidants with the capability to attenuate inflammation and promote healthful microbiome growth [17]. A meta-analysis of nineteen clinical trials, including 2,240 participants across eleven countries, concluded that omega-3 fatty acids, found in nuts, seeds, and fatty fish, is effective in reducing anxiety [18]. Berries and whole grains are rich in fiber which has been shown to possibly reduce the risk of depression, anxiety, and stress [19]. Fermented foods, like plain yogurt with active cultures and kimchi, are a great source of live bacteria that can enhance healthy gut function and decrease anxiety [20]. Cruciferous vegetables and leafy greens are high in fiber and micronutrients, such as Vitamins A, B, C, E, which have been shown to reduce symptoms of anxiety after supplementation [21,22]. Curcumin, the active ingredient in turmeric, has been shown to have a positive effect on by animal studies and three trials in humans [23].

CLINICAL IMPLICATIONS AND CHALLENGES

It is essential for clinicians to be familiar with the effects of lifestyle changes on anxiety severity guide treatment and provide the opportunity for patients to consider long-term solutions promoting overall wellness. The most unique aspect of this case is that the patient was highly motivated to make nutritional and dietary changes that required significant effort and adherence on her part, which may not be true in all cases. Patients with anxiety may find such large effect changes such as meal planning, cooking, or budgeting for healthier foods, difficult or overwhelming to implement, especially if they are already coping with mental health challenges. A 2022 systematic review of 108 studies assessing over 250,553 parents and 203,822 children find food insecurity to be significantly associated with various mental health outcomes, including anxiety [24]. Therefore, patients with anxiety experiencing food insecurity may find implementing dietary changes especially challenging, given their anxiety may have stemmed from the very issue. Clinicians should therefore ensure their patients experiencing food insecurity are connected with all local, state, and national resources possible to ensure they have access to nutritious food as a part of their treatment plan for anxiety.

LIMITATIONS

Results from a single case may not be applicable to the general population. Given the limited number of studies on dietary and lifestyle interventions for the treatment of anxiety disorders, with even less on combination interventions, further research is needed.

CONCLUSION

This case demonstrates the successful integration of nutritional psychiatry with pharmacological treatment in managing and alleviating symptoms of generalized anxiety disorder. By incorporating dietary and lifestyle changes, this approach aims to create a more holistic treatment plan, potentially reducing dependence on medications. The success of such interventions often hinges on personalized care and patient education, helping individuals make long-lasting changes in their nutrition, exercise, and stress management habits. However, the sustainability of this integrative approach remains an open question. It depends on several factors, including the patient's ability to maintain healthy behaviors, the availability of resources, and the support system in place. The case also points to the importance of collaboration between healthcare professionals from different disciplines—psychiatrists,

dietitians, and psychotherapists—who can work together to deliver comprehensive care. Additionally, while emerging research points to the benefits of diet on mental health, further large-scale clinical trials are essential to provide robust evidence that nutritional interventions can serve as long-term solutions in managing GAD and other mental health disorders.

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