

## CASE REPORT

# Schizophrenia Symptom Alleviation Through Implementation of a Lifestyle Intervention Program

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### ABSTRACT

**Background** • This case report illustrates the use of a lifestyle intervention program entitled “Vital Mind Reset” which led to the alleviation of disabling schizophrenic symptomology.

**Summary** • A 22-year-old male with onset of Tourette’s Syndrome and depression with suicidal ideation as a teenager began declining in mental vitality, resulting in the eventual diagnosis of treatment-resistant schizophrenia at the age of 17. At this time, he was admitted to an adolescent mental health ward due to delusional thinking and auditory hallucinations. Despite administration of a multitude of antipsychotic medications throughout the ensuing years, he was admitted yearly to the same hospital during the winter months until 2015. The patient began the Vital Mind Reset (VMR) program in 2017, committing

to a series of lifestyle interventions which included dietary modifications, daily meditations, and detoxification practices. After completing the program, the patient experienced significantly improved quality of life, as he was once again able to leave his house. One year after completing the program, his physicians reported his schizophrenia appeared “to be in remission.” Given these results, when medication and conventional therapies gain limited progress, lifestyle interventions outlined in the VMR program should be considered, perhaps even as first-line therapy. This case defies the chronicity of severe psychiatric symptomologies such as schizophrenia and exemplifies the potential for healing and resolution of persistent psychiatric illness. (*Adv Mind Body Med.* 2020;34(2):24-29.)

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### INTRODUCTION

This is a case of dramatic clinical remission after completion of the Vital Mind Reset (VMR) program following years of debilitating treatment-resistant schizophrenia. The VMR program is an online lifestyle intervention program that includes dietary modifications, meditations, and detoxification protocols. After only 19 days following this program, the patient began to experience improved quality of life that was unattainable with standard medication alone. This improvement included successfully leaving his house to enjoy time outdoors, which he had only

attempted once in that prior year. Since beginning the program in 2017, the patient has not required psychiatric hospitalization and no longer experiences visual hallucinations, olfactory hallucinations, or paranoia. He now maintains a regular sleep schedule and is able to partake in meaningful community involvement.

After following the VMR program for 2.5 years, the patient was able to successfully taper his psychiatric medications, including Clozapine from 350 mg QD to 300 mg QD and Sertraline 70 mg QD to 30 mg QD. He continues to follow the keystone dietary modifications of VMR which includes avoidance of caffeine, gluten, and dairy, and he continues with daily coffee enemas for detoxification. His case represents a promising solution for patients who experience limited gains from standard medication.

### PATIENT INFORMATION

#### Social and Family History

The patient is a 22-year old male born in Scotland after an uncomplicated pregnancy and delivery. His speech and motor milestones were age appropriate. Three or four years later, his mother took him and his younger brother to a

**Timeline.**

- 1996: Born in Scotland.
- 2000: Parents separated.
- 2006: Hospitalized for pneumonia.
- 2006: Moved to Australia.
- 2007: Hospitalized for pneumonia.
- 2009: School counselor reports huge differences in range on psychometric assessment (WISC-IV scale).
- 2009: Diagnosed with Auditory Processing Disorder and Tourette’s Syndrome.
- 2010: Referral for assessment and management of tics. Began refusing to attend school. Began experiencing depression and suicidal ideation.
- 2010: Younger brother elected to leave and live with his father.
- 2011: Admitted for observation on a locked child and adolescent mental health ward due to delusional thinking and auditory hallucinations.
- 2011: Transferred to a locked specialist inpatient unit ward.
- 2012: Integrated into a school program, living at home and continuing as a day patient.
- 2012: Patient returned to Scotland with his mother, where she remarried.
- 2013: Admitted to an adult ward in Scotland. Transferred to a child and adolescent unit and was discharged 5 months later. At this point carries diagnoses of treatment-resistant schizophrenia, Asperger’s Syndrome, Complex Partial Seizures, and Tourette’s Syndrome.
- 2014: Engaged in photography and other weekly activities with a youth support worker.
- 2014-2015: Yearly winter admission to the same hospital in Scotland, with last discharge in 2015.
- February 2017: Began Vital Mind Reset (VMR) program.

psychiatrist for help as a result of intense sibling rivalry, including an incident where the patient tried to gouge out his younger brother’s eye. No diagnoses were made, and no treatment was given at that time.

The patient’s parents separated when he was 4 years old. His father visited sporadically, and at 9 years of age, the patient started locking himself in the bathroom to avoid his father. He attended school in Scotland during which he briefly saw a speech therapist.

After the patient’s parents separated, his mother was threatened with deportation, as she was not from Scotland. In 2006 the patient moved to Australia with his mother and younger brother. His mother began studying accounting so she could work from home, as she could not leave her sons alone.

The patient initially did well in school, and then around age 14 started to experience significant difficulties. He was mocked for his Tourette’s Syndrome and had a teacher who “bullied” him by throwing away his work. He was also given a school suspension for throwing rocks while walking home from school.

His mother reports occasionally having to restrain the patient to prevent him from hurting his brother and that he would dance in the rain, climb on top of the fridge, and report that he had to “squeeze” lobsters out of his head.

Six years later, the family moved back to Scotland, where his mother remarried. Once back in Scotland, contact was resumed with his biological father.

There is a family history of Obsessive-Compulsive Disorder (OCD) and alcohol and/or drug misuse on the maternal side, as well as a history of alcohol and drug misuse on the paternal side. Both maternal and paternal families have a history of anxiety and chronic motor (but no vocal) tics. The patient’s mother has a history of postnatal depression, OCD, and alcohol use. The patient’s paternal aunt also has a history of postnatal depression. There is no known family history of psychosis.

**Psychiatric History**

Past medication trials including adverse reactions: As collected by authors from past charts, in as much detail as possible:

- Clozapine tabs, 700 mg
- Haloperidol tabs, 4 mg
- Lamotrigine tabs, 275 mg
- Sertraline HCl tabs, 75 mg
- Diazepam tabs, 4 mg
- Senna, two 7.5 mg tabs
- Laxido Orange Granules, prn
- Pregabalin caps, 150 mg
- Quetiapine tabs
- Olanzapine tabs
- Aripiprazole tabs
- Risperidone tabs, duration 20 months, discontinued due to extreme fatigue
- Amisulpride tabs, 500 mg
- Sodium valproate tabs
- Procyclidine HCl tabs
- Lactulose, 10 mls bd
- Bisacodyl, 10 mg
- Clonidine
- Fluoxetine

Personal history of substance abuse

	Age of first use	Most intensive use	Current use
Cocaine	N/A	N/A	N/A
Marijuana	N/A	N/A	N/A
Alcohol	16 years old	16 years old	2 beers per month at the most
Cigarettes	16 years old	While hospitalized	None, quit smoking April 2017
Other	N/A	N/A	N/A

## Psychiatric Hospitalizations

2011: Admitted for observation on a locked child and adolescent mental health ward due to delusional thinking and auditory hallucinations.

2011: Transferred to a locked specialist inpatient unit ward.

2012: Integrated into a school program, living at home and continuing as a day patient.

2013: Admitted to an adult ward in Scotland. Transferred to a child and adolescent unit and was discharged five months later.

2014-2015: Yearly winter admission to the same hospital in Scotland with last discharge in 2015.

## Physical Exam and Medications.

Per patient:

Height: 6'2"

Weight: 185 lbs

Medications and supplements as of February 2017:

- Clozapine 350 mg
- Sertraline 70 mg
- Lamotrigine 250 mg
- Taking a break from all supplements, which previously included:
  - o Zinc
  - o Magnesium
  - o Psyllium husks
  - o Liver capsules
  - o Milk thistle

Medications as of October 2019:

- Clozapine 300 mg
- Sertraline 30 mg
- Lamotrigine 250 mg
- No benzodiazepines or PRN medications

## Surgeries

No surgeries. Two hospitalizations for pneumonia.

## Typical day's diet

The patient's diet prior to intervention contained gluten and dairy. He was allowed 1 package of chips and 1 can of Coca Cola per day. Breakfast was typically rice puffs or cornflakes with cow's milk. Lunch was sandwiches or salad. Dinner consisted of supermarket meat and vegetables unless the patient asked his mother for a treat such as pizza. His mother reports they also had occasional dessert, as the medications made him crave sweet food, and she wanted to give him something to make him happy.

Patient's current diet is dairy-free and gluten-free. A typical day's diet is:

- Breakfast: Smoothie (2 bananas, 1 apple, berries, cashews, fermented and nonfermented coconut water, collagen hydrolysate, coconut oil, baobab powder)

- Lunch: homemade soup with bone broth base
- Dinner: meat and vegetables. An example is chili (beetroot, kale, carrots, courgettes, mushrooms, onions, garlic, turmeric, herbs, capsicum, liver powder, cacao powder, anchovies, kidney beans meat) served with rice and a salad.

## Mental Status Examination

Diagnostic Assessment Formulation

- Auditory Processing Disorder
- Treatment Resistant Schizophrenia
- Asperger's Syndrome
- Complex Partial Seizures
- Tourette's Syndrome

## Laboratory Testing

Laboratory Results of Note

Full blood count (FBC), electrolytes and liver function tests (E/LFTs), thyroid function tests (TFTs), Vitamin B<sub>12</sub>, folate, urine drug screen, and EEG were within normal limits on first admission to hospital. MRI taken while an inpatient was also normal.

## INTERVENTIONS

The patient began the Vital Mind Reset (VMR) online program in February 2017. Designed by Dr. Kelly Brogan, the VMR program is a comprehensive lifestyle intervention that implements dietary changes, mindfulness practices, and coffee enemas to support detoxification. The first 15 days of the program focus on mindfulness practices and daily lessons which educate the patient about their health and the importance of proper nutrition. Beginning on day 16, a moderate-starch, ancestral diet is initiated which eliminates food allergens such as gluten, sugar, certain oils, grains, legumes, and dairy. Overall, the VMR protocol seeks to restore health through simple, attainable lifestyle modifications that can be accomplished in the comfort of the patient's own home

One of the lifestyle changes outlined in the VMR program are mindfulness-based yoga practices, which have shown efficacy in reducing stress and improving emotional wellbeing in individuals with mood disorders.<sup>1</sup> For example, recent literature has shown that consistent yoga practice may enhance parasympathetic tone by altering the baseline reactivity threshold required to initiate a stress response.<sup>2</sup> In a randomized, controlled pilot study by Visceglia and Lewis, yoga in addition to conventional psychiatric treatment led to a significant improvement in psychopathology and perceived quality of life in inpatients with schizophrenia spectrum disorders.<sup>3</sup> One of the mindfulness practices implemented in the VMR program is called Kirtan Kriya, a kundalini yogic meditation that includes repeating a kirtan, or mantra, while performing a mudra, or physical motor movement.<sup>17</sup> Compared to music listening alone, kirtan kriya has been found to demonstrate significant and sustained improvements in measures of perceived stress, mood, sleep quality, and

quality of life.<sup>17</sup> In addition to improvement in emotional wellbeing with regular practice, it has been found that daily Kirtan Kriya meditation upregulates genes including immunoglobulin-related transcripts while down-regulating pro-inflammatory cytokines.<sup>18</sup> Overall, this therapeutic modality is a low-cost intervention essential to success on the VMR program.

One of the most impactful changes of the VMR program is the introduction of an elimination diet, whereas the most common food allergens are temporarily removed during the program in order to encourage healing of the gut and microbiome. These allergens include gluten, soy, corn, dairy, and legumes. For example, casein is a widely studied allergen; in subjects with recent onset schizophrenia spectrum disorder, increased anti-casein subunit IgG was associated with increased severity of negative symptomology.<sup>4</sup> Gliadin is an additional problematic protein found in wheat that has been shown to be highly resistant to digestive enzymes in the gut.<sup>19</sup> These proteins remain undigested and can cross into systemic circulation where gut permeability is compromised due to stress, infection, and toxic chemicals, igniting an inflammatory response.<sup>19</sup> As a result, IgA native gliadin antibodies have been found to be increased in schizophrenic patients.<sup>19</sup> Thus, the basis for these dietary modifications is to prevent autoimmune responses and subsequent systemic inflammation. While removing allergenic foods, VMR program participants supplement their diets with healthy fats such as olive oil, herbs, organic produce, pasture-raised meat, and fermented foods. While the diet includes many key components, clinical experience suggests that it is most essential that participants avoid gluten and dairy.

Given the dietary changes required by the VMR program, the patient's mother stopped purchasing processed foods and helped him reduce his gluten and dairy intake. In March 2017, he made more comprehensive diet changes with complete caffeine, dairy, and gluten elimination and use of filtered drinking water. No supplements were prescribed.

Dry skin brushing, coffee enemas, and removal of chemical-laden household items are recommended for patients on the VMR program to encourage detoxification. Suggestions are given for non-toxic alternatives for household cleaning supplies and personal care products so that exposure to chemicals is limited. Coffee enemas are recommended daily in the mornings with organic coffee brought to body temperature. Each enema is performed for 25 minutes, preferably after a bowel movement. Despite limited literature, this practice was passed on to the main author by Nicholas Gonzalez, MD, who had achieved remarkable clinical success. Therefore, coffee enemas are an integral part of the VMR program. The ancient theory of "auto-intoxication" states that the colon is a reservoir whereby toxic byproducts accumulate.<sup>5</sup> According to the Gerson regimen, which introduced coffee enemas for the purpose of cancer therapy in the 1930s, caffeine from the coffee enema is believed to dilate the bile ducts and encourage the process of toxin elimination from the liver.<sup>5</sup> Skin brushing is another ancient practice thought

to stimulate the movement of lymph through the lymphatic system, which relies on a combination of intrinsic and extrinsic factors to transport waste into the venous system for elimination.<sup>6</sup> Feeling the benefits, the patient has continued with coffee enemas for the past 2 years.

## OUTCOMES AND FOLLOW-UP

After following the VMR program for 19 days, the patient asked to go for a drive, and his mother took him out for 3 hours. This was a remarkable request because the patient had not agreed to go anywhere previously. In addition, he began to ask to spend time in forests, which he found soothing. His mother reports that in the prior year, they had only been outside for a walk once, and that event ended poorly. It was after the VMR program that the patient was willing and able to leave the house. He now goes for walks on a regular basis, including 2.5 hour hikes or taking the dog on 1 hour walks.

One year after beginning this intervention, the patient reports he still hears voices, but that they are not as loud, commanding, or as mean as the old voices he heard. He denies visual hallucinations, olfactory hallucinations, or paranoia. His physicians have reported that his "schizophrenia appears to be in remission."

The patient's quality of life has improved substantially. Prior to intervention the patient was waking up at 1pm on a "good" day and at 4pm on other days, and he had no community service involvement. He now wakes up around 8am on weekdays and 11am on weekends. He goes to bed at 9pm. Over the past year he has completed almost 500 hours of volunteer work with 3 different initiatives: organic gardening, recycling, and a palliative care men's group. He goes to the gym 3 times per week. He has completed theory and practical tests for obtaining a driver's license. His mother reports that he is also now able to formulate texts and emails without her input. He reports good mood most of the time, with a few short episodes of anger or flat mood due to drug withdrawal. His mother reports he has continued low self-esteem and self-worth, but that he receives a lot of positive feedback from other people in his community.

The patient continues on a caffeine-free, gluten-free, and dairy-free diet and still does the coffee enemas almost every day. He is able to make his own food.

## DISCUSSION

This case is a remarkable example of the impact that simple lifestyle changes can have on symptoms related to psychotic disorders. Prior to starting VMR, this young man was regularly exposed to gluten, dairy, sugar, caffeine, and nicotine. After removing these potentially problematic items, focusing on nourishing foods, and adding in the coffee enemas, his symptoms have improved and his quality of life has improved along with it.

The relevance of gluten to a number of health concerns has been a topic of heated discussion in recent years, and disorders related to mental health are no exception. Research

continues to emerge suggesting a link between non-Celiac gluten sensitivity and Celiac disease and psychosis. For example, one study of 100 patients with schizophrenia and 100 controls found that schizophrenic patients had higher mean anti gliadin IgG antibody levels.<sup>7</sup> Another publication describes a case in which a young girl experienced psychotic symptoms in relation to gluten consumption.<sup>8</sup> She experienced gastrointestinal symptoms along with psychotic symptoms that were not alleviated with antipsychotic treatment but which resolved upon starting and maintaining a gluten-free diet.<sup>8</sup>

Several mechanisms have been proposed for the relationship between gluten and disorders such as schizophrenia. One is through autoimmune mechanisms, such as seen in Celiac disease. Interestingly, although increased antibodies to gluten proteins can be seen in both Celiac disease and schizophrenia, the antibodies seen in schizophrenia seem to be reactive to different gluten proteins than are seen in Celiac disease, suggesting the response is slightly different.<sup>9</sup>

Two other mechanisms include an allergic response to wheat or the presence of a non-Celiac gluten sensitivity (related to innate immunity rather than an autoimmune or allergic response).<sup>10</sup> Benefits have been seen for the use of a gluten-free diet in schizophrenia, and discrepancies in research may be a result of challenges in defining or representatively capturing both gluten sensitivities and schizophrenia in the study populations.<sup>11,12</sup>

Besides gluten, dairy was also removed from the patient's diet in the present case. The "exorphin" explanation suggests that certain food components, such as components of wheat, can trigger symptoms by binding to opioid receptors in the brain. Casein, a component of bovine milk, falls into this classification of "exorphin" as well.<sup>20</sup> In addition, antibodies to both casein and gliadin have been identified in the cerebrospinal fluid of patients with schizophrenia.<sup>13</sup>

The patient in this study eliminated both caffeine and nicotine. The use of these substances is related, as smoking causes caffeine to be eliminated faster and caffeine consumption may increase as a consequence.<sup>14</sup> In patients with schizophrenia, the severity of smoking is related to how much caffeine is used.<sup>14</sup> In addition, there are several reported cases of caffeine intake preceding an aggravation of psychotic symptoms, which then resolve not with increased antipsychotic medication but with reduction of caffeine intake.<sup>15</sup> Interestingly, both substances are also being studied for potential benefits in patients with schizophrenia, although further research is needed to determine acute versus chronic effects.<sup>14</sup>

Finally, constipation is a known challenge for patients taking antipsychotic medications, and additional medications are often given to alleviate this.<sup>16</sup> As can be seen by the past medication history, this patient was no exception. Severe constipation can result in bowel obstruction, perforation, or death, and improving bowel regularity is an important aspect of treatment.<sup>16</sup> Enemas make up 16% of constipation

treatments in patients with schizophrenia on antipsychotic treatments.<sup>16</sup> Indeed, the patient in the present study found the implementation of regular coffee enemas particularly helpful (as noted in the "Patient Perspective"). It is important to note that as the patient's symptoms improved, he also increased his physical activity which would also aid in bowel regularity.

## CONCLUSION

The present case demonstrates the effect of a program involving simple lifestyle changes on the daily functioning and wellbeing of a young man with a complex presentation involving treatment-resistant schizophrenia, auditory processing disorder, Asperger's syndrome, complex partial seizures and Tourette's Syndrome. Given the severity of the case, and the multiple hospitalizations and medications that have played a role in the patient's history, the fact that this patient has been able to maintain improvements in symptoms and in daily functioning in conjunction with basic lifestyle adjustments is remarkable. Along this journey, he has also gone from posing a safety concern to himself and others to being an active volunteer and participant in his community. Further research should highlight the effect of similar lifestyle interventions in hopes of defining and elucidating such noninvasive treatment approaches that effectively allow patients to improve their health but also to remain in their communities as contributing members of society.

## PATIENT PERSPECTIVE

I can't remember anything about being so unwell. I remember bits about people in hospital. The way someone walks will remind me of a nurse. I do know my voices are so much better. They are manageable now but I don't want to remember. I do know I feel healthier than I ever remember and that coffee enemas really help my mood.

## INFORMED CONSENT

Patient has reviewed this document and consented to all of the information herein.

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