



Treating Crohn's Disease with a Plant-Based Diet – a Case Report



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Abstract

Crohn's disease is notoriously difficult to treat and this patient was no exception. Patients are typically treated with a wide range of drugs, most of which have significant side effects, and surgery. This is a case study of a 63-yr old male, who was first diagnosed with Crohn's disease in 1988. Over the past thirty years, he experienced persistent pain, chronic diarrhea and chronic fatigue. Extraintestinal manifestations included aphthous stomatitis, arthralgia especially in the knees and hips, eczema and uveitis. His comorbidities included shingles, exacerbated by immunosuppression, severe post herpetic neuralgia, and noise-induced hearing loss of both ears. The patient also has benign prostatic hypertrophy and diverticulosis.

Despite the full range of treatment, the patient remained with very significant symptoms, medication side effects and poor quality of life. In May 2017, the patient chose to go on a plant-based diet. Within two months, significant improvements in symptoms resulted. After three months, the patient was able to discontinue all immunosuppressant drugs. After one year, the patient reports no symptoms requiring medications other than ranitidine 150mg 2x/day and loperamide 10mg/day needed for post op management of resections. Fatigue, pain, diarrhea and all extraintestinal manifestations have virtually been eliminated. The patient reports a very large improvement in quality of life.

Keywords: Crohn's disease; Diarrhea; Fatigue; Pain; Plant-based diet; Vegetarian; Vegan

Abbreviations: BMI: Body Mass Index; CDAI: Crohn Disease Activity Index; CRP: C-Reactive Protein; HDL: High Density Lipoprotein; LDL: Low Density Lipoprotein

Introduction

The current standard treatment for Crohn's disease involves medication to manage symptoms and induce remission, and when necessary, bowel resection. An epidemiological study found that the risk of Crohn's disease was reduced by 70% in females and 80% in males following a vegetarian diet. This suggested treating Crohn's disease with a plant-based diet [1,2]. A well-designed interventional study published in 2010, using a semi-vegetarian diet, achieved a 100% remission rate at 1 year and 92% at 2 years [1,3].

A more advanced study published in 2017 examined whether a substantial improvement of the relapse-free rate in Crohn's disease could be obtained by incorporating three recently developed concepts in medicine: biologics, a plant-based diet and window of opportunity. This was followed by maintenance of remission with a plant-based diet, rather than further use of biologics with or without immunosuppressants [4]. All patients in this study who completed the protocol achieved remission at week 6. Remission rates by intention-to-treat and per protocol

analysis were 96% and 100%, respectively. Improvements were seen in biomarkers such as C-reactive protein (CRP) and Crohn Disease Activity Index (CDAI) and in mucosal healing. This study has shown that a plant-based diet can improve the efficacy of biologics such as infliximab [4].

While research shows the efficacy of a plant-based diet in the treatment of Crohn's disease, few physicians currently employ it as a therapeutic modality. This treatment, if used appropriately, can save the patient medication side effects, surgery, extraintestinal manifestations and quite a bit of money. Here, we report on a case of a patient with longstanding Crohn's disease, successfully treated with a vegetarian diet.

Case Report

A 63-year old male patient was first diagnosed with Crohn's disease in 1988 at the age of 33 years old. Once diagnosed, he realized that symptoms had been present since his late teens. Symptoms included persistent pain, chronic diarrhea and chronic

fatigue. Crohn's disease may be complicated by extraintestinal manifestations in up to 40% of patients [5]. In this patient, extraintestinal manifestations included aphthous stomatitis, arthralgia especially in the knees and hips, eczema and uveitis. The patient's medical history was otherwise unremarkable. He was normotensive and had a BMI within the acceptable range. Total cholesterol and ratio of HDL and LDL were within normal limits. Renal function was normal.

His comorbidities included shingles, exacerbated by immunosuppression, and severe post herpetic neuralgia (treated with block transforaminal steroid epidural and block lumbar epidural steroid), and noise-induced hearing loss of both ears. The patient had benign prostatic hypertrophy and diverticulosis.

The patient was initially treated with sulfasalazine and prednisone. This treatment was not fully effective. The patient complained that medication side effects were extreme irritability, greatly increased appetite with weight gain and trouble sleeping. His symptoms of Crohn's disease stabilized at a not very comfortable level with continued pain, occasional severe diarrhea and chronic, moderate fatigue.

Later treatments included were azathioprine, mesalamine, metronidazole, infliximab (discontinued due to allergic reaction), pregabalin, certolizumab pegol, famotidine, and Budesonide. More recently, albuterol, fluticasone, ranitidine and loperamide were added. However, significant symptoms persisted, although attenuated, and the patient continued to have a poor quality of life. Results of CT scan, MRI, fluoroscopic and endoscopic examinations were consistent with Crohn's disease. Biopsy confirmed the diagnosis.

During the course of illness, surgeries were required to:

- a) Relieve obstruction in the proximal duodenum and the gastric outlet.
- b) Remove the cecum and appendix with reanastomosis
- c) Resection of four severe obstructions along the jejunum and ileum
- d) Resection of two of the obstructed sections along with the ileocecal valve
- e) A cholecystectomy – extensive scarring was noted.

Results

In May 2017, the patient chose to go on a plant-based diet. Within two months, significant improvements in symptoms

resulted. By August 2017, the patient was able to discontinue all immunosuppressant drugs. After one year, the patient reports no symptoms requiring medications other than ranitidine 150mg 2x/day and loperamide 10mg/day needed for post op management of resections. Fatigue, pain, diarrhea and all extraintestinal manifestations have virtually been eliminated. The patient reports a very large improvement in quality of life.

He reports currently eating primarily whole grains, beans, fruits, vegetables, tofu, and using plant-based milks. Over the past few months he has begun to eat fish, mostly white fleshed with some salmon, usually around 3-4 times per month, eggs once or twice per week, and has some dairy products, always cultured, never milk, and ice cream once a week or so. The fish does not cause any symptoms but the eggs and dairy cause some very mild discomfort on occasion.

Discussion

The results for this patient are in line with interventional studies. The safety and efficacy of a plant-based diet to treat Crohn's disease would seem quite advantageous. It has no contraindications and no adverse reactions. Therefore, it may be safely used as monotherapy, or combined with standard treatments. Treatment with a plant-based diet also reduces the risk of common diseases that the Crohn's patient will face in common with all patients, such as coronary artery disease and type II diabetes mellitus.

Given the substantial advantages, more study is warranted. However, given its safety, the physician can institute therapy with a plant-based diet immediately.

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