


Patient Suffering in Chronic Digestive Diseases: Will Primary Care-Specialist Collaboration With Effective Interactive Communication and Integrative Medicine in the Plan of Care Improve Quality of Life?

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Abstract

Acute and chronic digestive diseases are causing increased burden to patients and are increasing the United States health care spending. The purpose of this case report was to present how nonconfirmatory and conflicting diagnoses led to increased burden and suffering for a patient thus affecting quality of life. There were many physician visits and multiple tests performed on the patient. However, the primary care physician and specialists could not reach a confirmatory diagnosis. The treatment plans did not offer relief of symptoms, and the patient continues to experience digestive symptoms, enduring this burden for over 2 years. The central theme of this paper is to inform health care providers the importance of utilizing evidence-based primary care specialist collaboration models for better digestive disease outcomes. Consistent with patient's experience, the authors propose to pilot/adopt the integrative health care approaches that are proven effective for treating digestive diseases.

Keywords

digestive diseases, cost and burden, quality of life, health care, spending, primary care specialist collaboration, integrative medicine, chronic digestive disease

Introduction

Acute and chronic digestive diseases are major public health problems and important causes of mortality and morbidity in the United States (1). According to the Centers for Disease Control and Prevention, the number of visits to physician offices and emergency departments with digestive diseases was 22.4 million and 8.3 million, respectively (2,3). The burden and cost of gastrointestinal (GI), liver, and pancreatic diseases are increasing each year. Total expenditures for GI diseases are US\$135.9 billion annually in the United States (2). Considering the multiple challenges this causes to patients and to the US health care system, it requires further exploration based on patient experiences, with a goal to reduce the burden on patients and health care spending (3).

It has been reported in the literature that effective collaboration between general practitioners and specialists improves patient care outcomes in chronic kidney disease, dementia, and liver disease (4–6). A meta-analysis conducted by Foy et al revealed that interactive communication

(timely, 2-way exchange of pertinent clinical information directly between primary care physicians [PCPs] and specialists) is associated with improved outcomes (7). The importance of collaboration with interactive communication among PCPs/gastroenterologists must be understood from the patient's perspective, which will further aid in early diagnosis and treatment of digestive diseases.

The use of alternative and complementary medicine approaches to relieve symptoms or treat various digestive

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Table 1. Food Items That Exacerbate the Patient's Gastrointestinal Symptoms and That Are Well Tolerated.

Food items that exacerbate the gastrointestinal symptoms	Food items that are tolerated and that relieve symptoms
Nonvegetarian food (meat of any type, fish of any type), egg yolk, butter, cheese, whole milk or reduced fat milk, yogurt, chocolate, cookies, bread (any type), kidney beans and other pulses, coconut (in large quantities), nuts, coffee, fermented beverages.	Grains (all grains), fruits, vegetables, root vegetables such as regular potatoes, sweet potatoes, lentils in limited quantities. Food items that aid in symptom control: radish, grapefruit/ grapefruit juice, apple cider, radish, Artichoke, vegetables, lemon/ lime water, strawberry, kiwi fruit, tamarind water

diseases and other diseases is adopted by health care systems in many countries worldwide (8–10). For example, the German health care model allows for the provision of integrative approaches to treat various disease conditions in inpatient care settings (10). It is important to explore whether such models are used to treat digestive diseases.

This case report presents a patient's experience of living with chronic digestive disease for over 2 years in the context of diagnosis delay and/or conflicting diagnoses, patient recommendation to minimize the burden through PCP and specialist collaboration, and the use of integrative medicine approaches.

Description

Alizia (pseudonym), a 52-year-old female, communicated the case details through an interview. The patient's written consent was obtained prior to history taking, record review, and for disseminating the experiences. The data were collected at the patient's home for a period of 1 week during February 2020. Alizia did not have any digestive issues until she reported acute digestive symptoms after visiting a country. The patient developed severe bloating and flatulence with a tender abdomen and non-radiating pain in the left lower quadrant of the abdomen. Alizia has no history of alcohol use, smoking, or illicit drug usage, and no significant family history of digestive diseases.

During her first visit to the PCP, her stool PCR for enteric bacteria/viruses/parasites tested normal. The liver function tests showed a mild elevation in Alanine Transaminase. The lipid profile showed elevations in triglycerides and cholesterol. Alizia was advised to drink plenty of fluids, eat a high fiber diet, and undergo computed tomography (CT) abdomen and pelvis. The results of the CT scan showed mild hepatic steatosis with no obvious digestive issues.

The patient's bloating and abdominal rigidity predominantly in the upper abdomen continued, so she consulted another physician. The physician determined the possibility of lactose intolerance. No tests were conducted to diagnose lactose intolerance. The patient started on Lactaid for 2 months and switched to a plant-based diet with occasional intake of fatty meals. Eating fatty meals aggravated the symptoms, for which the patient consulted the same doctor. An ultrasound abdomen was conducted and found biliary sludge. The physician referred Alizia to consult a general

surgeon for gallbladder removal. Alizia consulted her PCP for a further opinion.

The PCP advised Alizia to consult an experienced surgeon and a gastroenterologist. The surgeon recommended hepatobiliary imaging and a possible gallbladder removal. The gastroenterologist recommended upper GI endoscopy and the results were normal. The gastroenterologist then referred Alizia to consult a hepatologist. Anti-HbC and Fibroscan were conducted. The Anti-HbC was negative, and the Fibroscan results revealed normal liver function. In the hepatobiliary imaging, the gallbladder ejection was 44% which was above the normal range of >35%. Based on this result, the PCP advised against gallbladder surgery. The PCP advised another set of bloodwork. It was normal, except for mild elevation of HbA1C and mildly elevated triglycerides and cholesterol. A colonoscopy was ordered, with no digestive issues.

Alizia experienced persistent issues of flatulence and upper abdominal discomfort when going off the modified dietary plan (see Table 1). The PCP ordered another ultrasound abdomen. The results revealed no evidence of hepatobiliary pathologies.

Alizia noticed significant symptom relief after consuming selected vegetables and fruits namely, radish, artichoke, lemon/lime, grapefruit, and so on. as listed in Table 1.

Given her unresolved digestive disease, Alizia consulted another gastroenterologist. The gastroenterologist ordered an SIBO test, pancreatic elastase 1, and abdomen X-ray and prescribed peppermint oil. A behavioral neurosciences consultation was recommended. The X-ray and pancreatic elastase 1 test were normal. Alizia is experiencing relief of symptoms after taking peppermint oil capsules. The COVID-19 pandemic has affected appointments for SIBO testing and behavioral medicine consulting.

As described, Alizia had multiple appointments with the PCP and the specialists for over 2 years and performed many laboratory and diagnostic tests. However, no definite diagnosis has been made yet to treat Alizia's digestive issue. During the last visit (pre-COVID-19), the gastroenterologist diagnosed Alizia's case as functional GI disorder. The SIBO test is pending to make a confirmatory diagnosis and treat the case.

Results

Despite multiple visits to the PCP and to specialists for over 2 years, Alizia continues to experience symptoms. The patient

Table 2. Models/Approaches to Enhance Collaboration Between Primary Care Physician (PCP), Specialists, and Patients.

Model/approaches	Areas of collaborative practice	Resources/Year	Study location
Telehealth model	Hepatologist and PCP Gastroenterologists and patients	Casella et al/2020 Dobrusin et al/2020	United States United States
Telemedicine: applied to the medical home and its collaborating providers	Primary care pediatricians and pediatric surgical specialists	Marcin et al/2015	United States
E-consult: electronic communication system between clinicians	PCP and a medical or surgical specialist	Zoll et al/2015	United States
Specialist LINK and primary care network clinical pathways	Designed to link family doctors and specialists (It is a new approach to patient referral. It is a real-time, nonurgent telephone collaboration line)	Arain et al/2020	Calgary, Canada
Shared electronic medical record and clear chronic kidney disease (CKD) care plans as better communication tools	PCP and nephrologist collaboration	Greer et al/2019	United States
Primary care collaborative memory clinics (PCCMCs)	Primary care and geriatric specialists to manage complex dementia care	Lee et al/2019	Ontario, Canada

expresses that there is a gap in the collaboration and interactive communication between her PCP and specialists toward a confirmatory diagnosis leading to a lack of resolution.

As mentioned, Alizia reports that the integration of certain food items relieved symptoms. Radish and grapefruit were the 2 self-explored food items Alizia integrated in the dietary plan for symptom control. Radish (*Raphanus sativus*) is known to have been used as food and medicine for the prevention and treatment of digestive diseases with fewer side effects (11). Similarly, the hepatoprotective effects of grapefruit and other citrus fruits are cited in the literature (12). Alizia experiences great symptom relief after consuming citrus fruits such as grapefruit, lemon, oranges, and kiwi-fruit. Alizia is also aware of drug-food interaction of grapefruit and toxicity if consumed in greater quantities (12,13). Peppermint oil capsule is another herbal product that Alizia consumed daily to relieve bloating and flatulence. Peppermint oil is a safe and effective product for short-term treatment in functional GI disorders (14).

Albeit the consultation is pending, Alizia continues to practice meditation and engages in exercise. The role of gut directed hypnotherapy and cognitive behavioral therapy for hard-to-treat GI disorders is documented in the literature (15). Consistent with the literature, Alizia reports that the mind-body relaxation therapies and exercise are keeping her well.

Lessons Learned

The experience of living with chronic digestive disease and the uncertainty of reaching a confirmatory diagnosis can affect a patient's quality of life. The cost of treatment, including overall expenditure and out-of-pocket cost borne by the patient, has increased despite her having a popular medical insurance provider and coverage.

This case report reflects gaps and possibilities in the PCP/gastroenterologist collaboration in diagnosing and treating digestive diseases. A study conducted by Dobrusin et al reports that gastroenterologists and patients experienced

high satisfaction rates with the telehealth model during the novel Coronavirus 2019 pandemic (16). Addressing digestive disease issues by utilizing collaborative models of practice proven effective such as telehealth, E-consult, Primary Care Collaborative Memory Clinics, and so on might improve patient care outcomes (4–7,16–19) (See Table 2).

The usage of integrative approaches in the alleviation of digestive symptoms is widely reported in the literature (8–12,14,15). The patient in this case report also experienced symptom control by following a modified dietary plan, consuming special diets and herbal products, and engaging in mind–body relaxation techniques. From the patient perspective and consistent with the literature, adding alternative and complementary approaches early enough in the treatment plan would relieve/control the symptoms in digestive diseases.

Conclusion

Advancements in medicine have facilitated fast diagnosis and treatment of disease conditions. Despite these advancements, this case report revealed a patient's unresolved digestive disease burden that has continued for more than 2 years. Based on this case study, the authors propose 2 recommendations for clinical practice:

- (1) Strong emphasis must be placed on utilizing collaborative models of practice to improve communication and care coordination between the PCP and specialists. In recent times, the telehealth model is being used widely as a collaborative tool to improve interactive communication among clinicians.(6,16,17,20) Such models would facilitate health monitoring, collaboration, care coordination, and less expensive care, thus improving digestive disease outcomes.
- (2) The use of evidence-based integrative health approaches in the patient's plan of care is another

area needing attention. The German health care model, integrating different therapeutic approaches by a specially trained team, is patient-centered, intensive, and holistic (10). Models like these using integrative health care approaches early enough in the treatment plan must be piloted for application toward treating digestive diseases (10).

These 2 strategies would lessen the cost and burden of digestive diseases on patients as well as on the US health care system (3).

Authors' Note

This case report is based upon the history taking and record review from one patient for which the written consent was sought; therefore, approval from the Institutional Review Board was not necessary. To ensure privacy and anonymity, a pseudonym is used in the case presentation.

Declaration of Conflicting Interests

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