Impact of Diet on Inflammatory Bowel Disease Symptoms: An Adolescent Viewpoint

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Background: Dietary modification shows promise as therapy in inflammatory bowel disease (IBD); however, it is unknown whether adolescents are interested in a dietary approach.

Methods: Cross-sectional survey of adolescents with IBD ages 14–21 on disease knowledge, dietary habits, and perceptions of diet therapy.

Results: A total of 132 subjects (48.5% female), mean age of 17.8 years and median disease length of 5 years (range 0, 16), completed the survey. Diet was perceived as a symptom trigger by 59.8% of subjects, and 45.4% had tried using diet as a treatment for symptom resolution, often without physician supervision and with limited success. Subjects experiencing active disease symptoms as determined by Manitoba IBD Index were more likely to be currently modifying their diet compared to subjects without active disease symptoms (odds ratio = 4.11, confidence interval = 1.58, 10.73, P = 0.003).

Conclusions: Adolescents with IBD perceive a relationship between diet and disease symptoms and are interested in dietary modification as a symptom management option.

Lay Summary
Increasing evidence links diet to inflammatory bowel disease (IBD) symptoms and disease exacerbations. Dietary modification is being explored as a disease management method and studies indicate that dietary modification may be effective for children with IBD. In this study, 132 adolescent IBD patients (14–21 years old) were surveyed about their disease symptoms, diet, and thoughts about modifying their diet to control symptoms. Over half of the subjects stated specific foods or food categories made their symptoms worse. Of these subjects, just less than half tried changing their diet to control their disease. A majority of subjects found dietary modification challenging, primarily because they could no longer eat favorite foods. The most common reason for discontinuing dietary modification was a lack of symptom improvement. However, the subjects that reported using diet modification tended to have more active disease symptoms and many were attempting diet modification without the assistance of their doctor or dietitian. These results show that many adolescents with IBD believe diet changes disease symptoms and are likely to self-modify their diet to try to manage their disease. Adolescent IBD patients may have better success with dietary modification strategies with assistance from medical professionals using electronic educational platforms.

Key Words: adolescents, diet, inflammatory bowel disease, survey

INTRODUCTION
Inflammatory bowel disease (IBD) is a chronic inflammatory condition caused by a combination of multiple risk factors, resulting in relapsing inflammation of the gut. IBD can present at any age; however, the peak age of onset is between 15 and 35 years of age, with approximately 1 quarter of all IBD patients diagnosed before the age of 20. Traditional therapeutic strategies involve immunosuppressive drugs to control the inflammation caused by aberrant immune activation. However, IBD is multifactorial in etiology, and these types of treatments do not directly address 2 major risk factors for disease development: alterations to the intestinal microbiome and consumption of a Western diet. Diet and the microbiome play into and off of one another in both the development and progression of disease, making them ideal targets for new lines of induction and maintenance therapies.

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Evidence from etiological and interventional studies suggest that diet and microbiome-focused therapeutics may be most beneficial in adolescent and young adult IBD patients.8–12

Adolescence is a challenging time for IBD patients due to increased social pressures, desire for independence, and the shifting of disease management responsibility from the parent to the child.13 There is a high rate of treatment noncompliance (75%–85%) in adolescents, and noncompliance is a major risk factor for disease relapse, acute hospitalization, and surgery.13 During this time of their life, it is critical that IBD patients understand the nature of their disease and the importance of treatment adherence to effectively manage their disease and improve their quality of life.

As food is a large aspect of social experiences, compliance with a strict dietary regimen to manage disease symptoms may be difficult for adolescents. This difficulty is compounded by the fact that IBD can cause psychological stress centered on the topics of food and nutrition.14 Therefore, a greater understanding of the factors that adolescents view as barriers to following treatment plans and an evaluation of the effectiveness of current platforms used to communicate disease information are needed to design successful strategies for disease management in adolescent IBD patients. The aim of the current study was to examine the knowledge, perceptions, and attitudes of adolescents and young adults with IBD on the relationships between disease, diet, and dietary modification for symptom management.

MATERIALS AND METHODS

Subject Recruitment

We conducted a cross-sectional survey of adolescent IBD patients ages 14–21 who presented for routine care in the Department of Pediatric Gastroenterology at Cleveland Clinic Children’s Hospital between April and September 2018. The study protocol was approved by the Cleveland Clinic Pediatric Institute Research Committee and Institutional Review Board. Inclusion criteria for enrollment in the study were a diagnosis of IBD at least 3 months prior to enrollment and parent/legal guardian permission if under the age of 18 years. Patients were excluded if they were unwilling to participate or unable to complete the survey without assistance.

Survey Design

The survey was designed based on published and validated patient surveys pertaining to diet,15 studies of adolescent IBD patients,16,17 the SF-36 Health Survey,18 the Manitoba IBD Index (MIBDI) survey,19 and in consultation with 2 pediatric gastroenterologists (J.A.K. and N.B.) and a dietitian with expertise in IBD (G.A.M.C.). The survey was converted to an electronic format for administration and the data were collected using Research Electronic Data Capture (REDCap) survey tools on an electronic tablet. The questions were formatted utilizing a combination of check boxes, Likert-type rating scales, and short answer responses. The survey was made with a branching design, with the survey diverging on questions related to usage of dietary modifications to manage IBD symptoms (Fig. 1). Participants answered between 60 and 100 questions and average completion time was 15 minutes.

The survey incorporated questions to determine adolescent perceptions of diet in relationship to their disease, the prevalence of subjects currently attempting a diet, willingness to initiate and adhere to dietary modification, and factors that influence willingness to modify their diet. Dietary modifications listed in the survey were selected based on literature searches of recently published clinical trials and in consultation with J.A.K. and G.A.M.C. Subjects were given 2 additional diet options: “food exclusion” and “other.” Food exclusion diets were defined as a dietary modification that does not conform to the parameters of the established diets listed in the survey, but was a purposeful removal of 1 or several foods that are believed by the subject to aggravate their IBD. “Other” diets were anything they did not think matched with the other provided categories. Information about the subject’s current diet was collected as part of the survey using a food frequency questionnaire (Supplementary Data Content 1). Using fillable text boxes, subjects were asked to identify food(s), if any, that they perceived altered their IBD symptoms.

Additionally, the survey collected the subject’s demographic information, and information regarding their knowledge of disease diagnosis, disease activity, history, and medications. Disease activity was categorized using the MIBDI,19 which assesses disease activity based on a patient’s 6-month recall of symptom persistence. For all completed surveys, clinical data from the electronic medical record (EMR) were collected regarding disease diagnosis, disease history, and current treatments. Subject responses were compared with the same disease information recorded in the EMR for accuracy. The subjects were also asked where they obtained their IBD management information and what resources they found most useful or would benefit from being available to help them understand their disease and to identify avenues to improve their knowledge. The subject’s responses are abbreviated as SR and electronic medical record reported information on disease and diet is abbreviated as EMR-R.

Data Analysis

Subject demographics, severity of disease, dietary influences, EMR and comparable results in surveys, and perceptions on diet usage were described by medians and ranges for continuous variables, and counts and percentages for categorical variables. Questions pertaining to diet usage were analyzed in subcohorts (Fig. 1). The first subcohort of subjects self-reported currently utilizing purposefully modified diets to manage IBD symptoms. The second subcohort of subjects self-reported having tried purposefully modified diets to manage
IBD symptoms in the past. The third subcohort of subjects never considered changing their diet as part of treatment or who only considered changing their diet, but never tried.

All subjects were given a list of disease descriptors used to describe IBD characteristics. They were asked to select all descriptors they believed had been used by their physician to describe their disease, to the best of their knowledge. To assess this knowledge, a point was awarded for every term correctly marked (indicating the term had been used) or left blank (indicating it was not used). Receiving 75%–100% of total possible points was considered good, 40%–74% fair, and less than 40% poor knowledge. Lists of medications and supplements (eg, vitamins/minerals, herbals, oral-liquid drinks) commonly prescribed to IBD patients were similarly presented on the survey and analyzed in the same manner.

FIGURE 1. Branching pattern of survey design, displaying how subjects were divided into 3 subgroups used for analysis of diet perceptions. All subjects answered questions about demographics, disease information, and sources of information, as well as completed a food frequency survey (yellow boxes). The 3 subgroups were determined by self-reported diet utilization: never tried (red box), currently trying (green box), and previously tried (blue box).

IBD symptoms in the past. The third subcohort of subjects never considered changing their diet as part of treatment or who only considered changing their diet, but never tried. All subjects were given a list of disease descriptors used to describe IBD characteristics. They were asked to select all descriptors they believed had been used by their physician to describe their disease, to the best of their knowledge. To assess this knowledge, a point was awarded for every term correctly marked (indicating the term had been used) or left blank (indicating it was not used). Receiving 75%–100% of total possible points was considered good, 40%–74% fair, and less than 40% poor knowledge. Lists of medications and supplements (eg, vitamins/minerals, herbals, oral-liquid drinks) commonly prescribed to IBD patients were similarly presented on the survey and analyzed in the same manner.

Data analysis was performed using SAS version 9.4 (SAS Institute, Cary, NC) and R version 3.50 (Vienna, Austria) software. McNemar’s test and the exact symmetry test were used to compare results between physician-filled EMRs (EMR-R) and subject-reported surveys (SR), as well as the source of information related to IBD and diet among current diet users. Gwet agreement coefficients (AC1)26 and 95% confidence intervals (CIs) were used to measure agreement between SRs and physician-filled EMR for outcomes of interest. Pearson chi-square test was used to compare MIBDI disease activity between diet cohorts and compare diet modification between levels of medication knowledge. All tests were 2-tailed with an alpha of 0.05.

RESULTS

Study Population

One hundred forty-seven adolescents and young adults with IBD were approached for the study of which 132 subjects completed the survey (Fig. 1), resulting in a response rate of 89.8%. Of the 132 subjects, 82.6% had Crohn’s disease, 13.6% ulcerative colitis, and 3.8% indeterminate colitis, with a median disease length of 5 years (Table 1). Mean age at enrollment was 17.8 years (14, 21), and median age at diagnosis was 13 years.

The MIBDI was active (constant to occasional symptoms) in just over half (54.2%, n = 71) of subjects (Table 1). Most recalled experiencing at least 1 disease flare-up in the last year with abdominal pain, fatigue, and diarrhea identified as the most common symptoms experienced (Figs. 2A, B). Subjects reported that these symptoms disrupted their daily life, with 51.5% (n = 67) often avoiding certain foods and 15.3% (n = 20) skipping meals (Fig. 2C).

Dietary Habits

Diet was identified as a symptom trigger by 59.8% (n = 79) of subjects, second only to stress (72.7%, n = 96) (Fig. 2D). A wide range of food items were reported as potential culprits. Similar to previous reports,21–26 oily and fatty foods, dairy, spicy foods, fresh fruits and vegetables, seeds and nuts, and acidic foods were the most frequently identified food categories, encompassing 65.2% of identified dietary triggers (Fig. 2E and Supplementary Data Content 2).

When asked about diet modifications to manage their IBD symptoms, just under half (45.4%, n = 60) of subjects had previously (25.8%, n = 34) or were currently (25.0%, n = 33) modifying their diet, with 7 subjects falling into both the previous and current diet modification categories. Subjects experiencing active disease symptoms as determined by MIBDI were more likely to be currently modifying their diet compared to subjects without active disease symptoms (odds ratio = 4.11, CI = 1.58, 10.73, P = 0.003). When asked which specific diet(s) they were currently utilizing or had tried in the past, subjects identified a wide variety of dietary modifications (Table 2). A food exclusion diet and a gluten-free diet were the most frequently previously utilized diets (n = 11 each), and a food exclusion diet was also the most currently utilized diet (n = 12). For all 3 top dietary interventions reported by subjects to be utilized, there was no dietary change recorded by the managing physician or dietitian (all P < 0.01) (Table 2).

Overall, subjects reported following a diet significantly more often than documented in EMR-R (25.0% vs. 15.0%,
Of the 33 subjects who reported currently modifying their diet, only 8 (24.2%) were recommended to modify their diet by their physician, nurse, or dietitian (Fig. 3A). The converse was also observed with EMR-R recommended diet therapy recorded

| Characteristic                             | SR              | EMR-R           | Gwet AC1   |
|--------------------------------------------|-----------------|-----------------|------------|
| Male (n, %)                                | 68 (51.5)       | —               | —          |
| Female (n, %)                              | 64 (48.5)       | —               | —          |
| Race (%)                                   |                 |                 |            |
| American Indian/Alaskan Native             | 0.76            | —               | —          |
| Asian                                      | 1.5             | —               | —          |
| Black/African American                     | 9.1             | —               | —          |
| Hispanic/Latino                            | 6.1             | —               | —          |
| White                                      | 86.4            | —               | —          |
| Prefer not to say                          | 2.3             | —               | —          |
| Age at enrollment, years (mean, [range])   | 17.8 [14, 21]   | —               | —          |
| Age at diagnosis, years (median, [range])  | 13 [4, 19]      | 13 [2, 18]      | —          |
| Length of disease, years (median, [range]) | 5 [0, 18]       | 5 [0, 16]       | —          |
| MIBDI score (n, %)                         |                 |                 |            |
| Inactive                                   | 61 (45.8)       | —               | —          |
| Active                                     | 71 (54.2)       | —               | —          |
| IBD subtype (n, %)                         |                 |                 |            |
| Crohn’s disease                            | 112 (83.6)      | 109 (82.6)      | 0.94 (0.90, 0.98) |
| Ulcerative colitis                         | 20 (14.9)       | 18 (13.6)       | —          |
| Unclassified/indeterminate colitis         | 2 (0.14)        | 5 (3.8)         | —          |
| Disease location (n, %)                    |                 |                 |            |
| Small intestine only                       | 37 (27.8)       | 20 (15.2)       | 0.33 (0.22, 0.46) |
| Large intestine only                       | 26 (19.5)       | 28 (21.2)       | —          |
| Both small and large intestine             | 44 (33.1)       | 84 (63.6)       | —          |
| Don’t know                                 | 26 (19.5)       | —               | —          |
| Medications (n, %)                         |                 |                 |            |
| Antibiotics                                | 6 (4.5)         | 5 (3.8)         | 0.91 (0.85, 0.96) |
| Aminosalsicylates                          | 25 (18.9)       | 49 (37.1)       | 0.62 (0.48, 0.75) |
| Corticosteroids                            | 12 (9.1)        | 21 (15.9)       | 0.82 (0.73, 0.90) |
| Immunomodulators                           | 51 (38.6)       | 67 (50.8)       | 0.58 (0.44, 0.72) |
| Biologic therapies                         | 78 (59.1)       | 88 (66.7)       | 0.80 (0.70, 0.90) |
| None                                       | 4 (3.0)         | 2 (1.5)         | 0.97 (0.94, 1.00) |
| Other                                      | 16 (12.1)       | 0 (0)           | 0.86 (0.79, 0.93) |
| Don’t know/don’t remember                  | 9 (6.8)         | —               | —          |
| Supplements (n, %)                         |                 |                 |            |
| Iron                                       | 15 (11.4)       | 19 (14.4)       | 0.73 (0.62,0.83) |
| Folic acid/folate                          | 15 (11.4)       | 41 (31.1)       | 0.61 (0.48, 0.75) |
| Vitamin D                                  | 33 (25.0)       | 73 (55.3)       | 0.037 (−0.14, 0.22) |
| Vitamin B12                                | 6 (4.5)         | 0 (0)           | 0.95 (0.91, 0.99) |
| Fiber                                      | 3 (2.3)         | 0 (0)           | 0.98 (0.95, 1.00) |
| Multivitamin                               | 23 (17.4)       | 19 (14.4)       | 0.77 (0.67, 0.87) |
| Probiotics                                 | 16 (12.1)       | 11 (8.3)        | 0.84 (0.76, 0.92) |
| None                                       | 85 (64.4)       | 24 (18.2)       | −0.044 (−0.22, 0.14) |
| Other                                      | 10 (7.6)        | 10 (7.6)        | 0.89 (0.83, 0.96) |
| Don’t know/don’t remember                  | 1 (0.76)        | —               | —          |

SR and EMR-R data are both reported when applicable. Gwet AC1 (95% CI) were used to measure agreement between SRs and medical record data.

*P* = 0.033, with 72% agreement between SR and EMR-R on current status of diet modification (AC1 = 0.59, CI = 0.45, 0.73).
for 12 subjects (MIBDI 33% active, 66% inactive) without concomitant SR compliance (Fig. 3A). Similar findings were observed in responses from 34 subjects that reported previous dietary modification; only 8 (23.5%) had documented recommendations from their physician (AC1 = 0.43, CI = 0.25, 0.61) (Fig. 3B). Likewise, in this prior dietary modification group, an additional 14 subjects were previously recommended to modify their diet, but did not comply (Fig. 3B).

Twenty-one (70.0%) of subjects currently modifying their diet found dietary protocol-adherence sometimes difficult. The most common reason for compliancy difficulties was the restriction of favorite foods (76.2%, n = 16) (Fig. 3C). The subjects reporting unsuccessful dietary modification compliancy (25.7%, n = 34) most commonly cited perceived lack of improvement in their IBD symptoms as the primary reason for stopping the diet (48.4%, n = 15) (Fig. 3D).

**Disease Knowledge**

We assessed the subject’s knowledge of their disease and its medical treatment as a means to determine if subjects
modified their diet based upon their understanding of their disease. In our study, only 21% of subjects indicated that they understood their disease diagnosis enough to fully explain it in detail to others. Compared to EMR-R, 94.7% (n = 125) subjects correctly identified their IBD subtype with very good agreement between SR and EMR-R data (AC1 = 0.94, CI = 0.90, 0.98), but only 48.1% (n = 63) correctly identified disease location (AC1 = 0.33, CI = 0.22, 0.46) (Table 1). Additionally, 66.7% (n = 88) and 67.4% (n = 89) of subjects had good knowledge (>75%) of physician-prescribed medications (Supplementary Data Content 3A) and nutrition supplements (Supplementary Data Content 3B), respectively. Complete EMR-R medication usage is listed in Table 1. When comparing current diet users (n = 33) with nonusers (n = 99), we found no correlation between knowledge of prescribed medications and current use of diet modification (P = 0.67). Similarly, we found no correlation between prior utilization of diet modification (n = 34) and knowledge of prescribed medications (P = 0.32).

Interestingly, even though 81.8% (n = 108) of subjects had EMR-R dietary supplement recommendations, over half of subjects (64.4%, n = 85) indicated nonuse of supplements (n = 19, AC1 = 0.044, CI = −0.22, 0.14) (Table 1). Vitamin D was the highest prescribed dietary supplement, and merely 50.0% of subjects correctly identified it as being prescribed, resulting in poor agreement (AC1 = −0.044, CI = −0.22, 0.14). Most subjects (71.8%, n = 94) specified that they were at least partially in charge of ensuring they follow their prescribed treatment plan, with a near equal proportion (69.5%, n = 91) receiving assistance from their parent or guardian.

Sources of Disease and Treatment Information

Subjects had a high preference (94.7%, n = 124) for receiving information about their disease and medication options from medical professionals (doctors, nurses, and dietitians), and many subjects added to this with information they found from the internet (60.3%, n = 79) (Fig. 4A). Among subjects currently modifying their diet, there were no differences in what resources they used to collect information about disease and diet information. From medical professionals, 96.7% sought information about IBD, whereas 86.7% received information about potential diets to manage their disease symptoms (P = 0.25) (Fig. 4B). Similarly, 70.0% supplemented information about IBD with internet resources, and 63.3% turned to the internet for additional information on diets (P = 0.75) (Fig. 4B).

When subjects who had never tried modifying their diet (n = 71) were asked what resources they believed would make it easier for them to try dietary modification, most preferred to have a written list of approved food items (47.9%, n = 34), work directly with a dietitian/nutritionist (43.7%, n = 31), or be provided with sample menus (40.8%, n = 29) (Fig. 4C). Most of these subjects stated they preferred a web-based platform, such as a web site (32.4%, n = 23) or phone application with a searchable database (49.3%, n = 35), as opposed to written printed information in the form of a pamphlet or book (15.5%, n = 11) to help them garner information on dietary modifications (Fig. 4C).

**DISCUSSION**

In this cross-sectional survey of adolescents and young adults with IBD, we determined that they not only identified...
a relationship between their diet and their disease symptoms, but that they self-modified their diet in an attempt to achieve symptom relief. While subjects who tried modifying their diet often found little success and were faced with a multitude of perceived compliance challenges, it was unclear whether this was due to the lack of efficacy for the (self)-selected dietary modifications, lack of guidance by a trained dietitian, or non-compliance. Diet is an important factor in both the onset and the progression of IBD, and global shifts in food consumption have been implicated in its increasing incidence. Surveys of adult IBD patients indicate that 48%–71% of patients believe that diet impacts their disease; however, few studies have looked at whether adolescent patients share this belief, or are willing to try dietary modifications. What is clear from this study is that disease symptoms and patient-reported disease activity influence the decision of adolescents with IBD to self-modify their diet.

With the increase in knowledge of the pathophysiology of IBD, there has been significant interest in the relationship between diet and inflammation in IBD. Specifically, diet or individual dietary components have become a focal point of basic science and clinical research to ameliorate the intestinal inflammatory response in IBD. This is driven by both physician and patient preference to find safe, effective treatment options while minimizing side effects. Medical nutrition therapy provided by a registered dietitian–nutritionist has been proven a successful therapy in controlling other chronic diseases such as metabolic syndrome, cardiovascular disease, obesity, type II diabetes mellitus, and chronic kidney disease. In the treatment of Crohn’s disease exclusive enteral nutrition (EEN) is considered an optimal therapy to induce remission in children and adolescents due to the combination of low side effects and high efficacy (80%–85% remission rate). Implementation of EEN requires strict guidance and support from medical staff, and patients are largely restricted from consuming solid foods. Many dietary protocols have been developed in the hopes of recapitulating the efficacy of EEN but allowing for consumption of ordinary foods, albeit with specific restrictions. The specific carbohydrate (which was popular among subjects in our study), Crohn’s Disease Exclusion Diet, low-FODMAP
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(fermentable oligo-, di-, mono-saccharides, and polyols), an autoimmune protocol, and Anti-Inflammatory (IBD-AID) diets have been shown to illicit changes in the fecal microbiome and aid in the resolution of symptoms, but to date have not been shown to result in complete remission with endoscopic mucosal healing and normalization of inflammatory markers.16,40–44

As our data suggest, adherence to a stringent diet can be challenging due to a variety psychological, social, and dietary-restriction related reasons. Strict elimination diets can make it difficult to identify approved food items. Additionally, an individual’s favorite foods may not be on the approved list, while undesirable foods may be encouraged, decreasing enthusiasm to adhere to the diet. In society today, eating is closely tied to social interactions, and limitations in dietary choices can create both social and psychological strains.14 Stress, in turn, can have a negative impact on dietary choices and behaviors.45,46 Stress has been identified as a key IBD symptom trigger in both this study and others.47 and the complex relationship between stress and food can compound to further exacerbate IBD symptoms. Further research and efforts must be made to uncouple these factors as they may create a vicious cycle that may result in persistent aggravation of disease symptoms.

Technology is rapidly advancing, and the platforms in which adolescents prefer to receive information tend to be drastically different than prior generations. While our subjects still readily sought advice from medical staff, they also often turned to less reliable sources, such as internet blogs and web sites. This may be why our study identified that a large proportion of subjects were utilizing dietary modifications without documented physician and/or dietitian direction or support. This is a largely unreported phenomenon in pediatric IBD. Food avoidance is commonly documented, but attempts to self-adhere to a specified dietary modification are rarely reported.34,48 Many web sites contain reliable information with good-intentioned advice, but the information may be hard to understand and reliable sources may be overshadowed with more attractive and misleading information. The vast amount of readily available information may have contributed to both the desire to try “dietary freelancing” and the limited success with the dietary interventions experienced in our cohort.

The results of this survey are encouraging for expanding the study of diet-based therapy and promoting the willingness of physicians to implement in adolescent IBD populations. Even if the physician is not broaching the topic of diet, patients are interested and pursue dietary modification on
their own. An open dialogue between patients and their gastroenterologist, along with frequent consultation with a dietitian, about dietary modification could help focus patients on a specific protocol that has the most potential to benefit them, and ensure they maintain compliance and adequate nutritional status.

A limitation of our study was the small, single-center study population, but many of our findings echo what has been determined in other studies—adolescent IBD patients perceive a link between diet and disease (59.8% in our study) and are receptive to diet therapy (45.4% in our study), similar to 7%–48% in other reports.16,17,33,34,48 While our study population was small, our response rate was robust at nearly 90%. This may be due to the use of an electronic tablet platform to administer the survey. Electronic and web-based platforms are highly popular with younger patients; physicians and researchers should readily take advantage of this when directing patients to reliable information sources or conducting future studies.

Our survey was designed to cast a broad net to collect information pertaining to a large variety of topics, including disease knowledge, perceptions on current treatments and the potential of dietary modification therapy, current dietary habits, and sources of information. While we were able to capture a large amount of information directly from adolescent IBD patients, we cannot draw any conclusions on the level of compliance and how that correlates to perceived success or failure of a dietary modification. We also surveyed patients, while the recommendations of medical staff were limited to EMR documentation.

CONCLUSIONS

Dietary protocols to treat IBD and disease symptoms continue to be a growing area of research, but patient interest in this new potential avenue of therapy that requires significant effort and compliance is rarely reported. Our study suggests that a large proportion of adolescent IBD patients may already be attempting dietary modification, and therefore would be receptive to a modified dietary plan under the guidance of their gastroenterologist and dietitian. Much is still unknown about how dietary modification will fit in with current treatment regimens, but patient interest informs us that it is necessary to continue development and research of this promising therapeutic option.

SUPPLEMENTARY MATERIAL

Supplementary data are available at Crohn’s & Colitis 360 online.

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DATA AVAILABILITY

The authors confirm that the data supporting the findings of this study are available within the article and/or its Supplementary Material. Survey tool materials are available upon request.

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