May 20th, 5:00 PM - 7:00 PM

Pilot Testing a Novel Treatment for Inflammatory Bowel Disease

Barbara C. Olendzki
University of Massachusetts Medical School

Gioia Persuitte
University of Massachusetts Medical School

Taryn Silverstein
UMass Memorial Health Care

See next page for additional authors

Pilot Testing a Novel Treatment for Inflammatory Bowel Disease

Barbara Olendzki , RD, MPH; Gioia Persuitte, MPA; Taryn Silverstein, DO;
Katherine Baldwin, MD, David Cave, MD, PhD; John Zawacki, MD; Kanishka Bhattacharya, MD, Yunsheng Ma, MD, PhD

University of Massachusetts (UMass) Medical School and UMass Memorial Health Care, Worcester, MA

BACKGROUND and OBJECTIVE

Inflammatory Bowel Disease (IBD), which includes Crohn's disease (CD) and ulcerative colitis (UC), are chronic non specific inflammatory conditions. Standard IBD treatment typically employs a combination of anti-inflammatory and immune suppressive medications; however, the pharmacological approach is not by itself curative. The Anti-Inflammatory Diet for IBD (IBD-AID), which is derived and augmented from The Specific Carbohydrate Diet (SCD), is a nutritional regimen that restricts the intake of complex carbohydrates such as refined sugar, gluten-based grains, and certain starches from the diet. These carbohydrates are thought to provide a substrate for pro-inflammatory bacteria. The second component of the diet involves the ingestion of pre- and probiotics to help restore an anti inflammatory environment.

Study Objective

To assess the efficacy and feasibility of the Anti –Inflammatory Diet (IBD-AID) intervention for the treatment of IBD.

METHODS

Intervention: Patients were recruited from the UMMHC gastroenterology clinic upon referral from their gastroenterologist. They received individual instruction of the diet and its restrictions through 5 individual nutrition sessions over approximately a 6-10 month period. Support materials were provided. Cooking classes were also available to the patients.

Outcome Survey Measures:

Ulcerative Colitis: Modified Truelove and Witts Severity Index (MTLW)
Scoring system of 0-21 points, clinical response is defined as a decrease from baseline score of 50% or greater, or less than 10 on 2 consecutive days

- Number of stools/day
- Nocturnal stools
- Visible blood in stools
- Fecal incontinence
- Abdominal pain/cramping
- General well-being
- Abdominal tenderness
- Use of anti-diarrheal drugs

Probiotic Foods	Prebiotic Foods
Aged cheeses	Artichokes
Dark chocolate	Asparagus
Fermented cabbage	Bananas
Kefir	Chicory root
Miso soup	Garlic
Microalgae	Honey
Pickles	Leeks
Yogurt (active)	Oats
	Onions

Crohn's Disease: Harvey Bradshaw Index (HBI)

- General well-being (0 = very well, 1 = slightly below average, 2 = poor, 3 = very poor, 4 = terrible)
- Abdominal pain (0 = none, 1 = mild, 2 = moderate, 3 = severe) number of liquid stools per day
- Abdominal mass (0 = none, 1 = dubious, 2 = definite, 3 = tender)
- Complications, with one point for each.

RESULTS

Age	Sex	Disease	Disease duration	Extent disease	Dx Based on
39	F	CD	8 years	Rectum to transverse colon	Colonoscopy
47	F	CD	4 years	Distal ileum	Colonoscopy & MRI
39	F	CD	9 years	Distal ileum	Small bowel follow through
24	F	CD	14 years	Small bowel	Capsule endoscopy, sigmoidoscopy
39	M	CD	7 years	Ileocecal, perianal area	Colonoscopy and capsule endoscopy
69	M	UC	24 years	Descending colon & rectum	Colonoscopy
19	F	UC	5 years	Pan-colonic	Colonoscopy
40	M	CD	1 year	Colonic	Colonoscopy & MRI
41	M	CD	8 years	Distal ileum	CT scan & colonoscopy
37	F	CD	4 years	Ileocecal	CT scan & pathology from surgery
70	F	UC	19 years	Pan-colonic	Colonoscopy & histology

Age	Sex	Disease	Prior Tx Include	Recent Tx	HBI/MTLW before		HBI/MTLW after
39	F	CD	ASA, IM, aTNF	ASA +IBD-AID	HBI	12	3
47	F	CD	S, IM, aTNF	S(taper) + IBD-AID	HBI	9	2
39	F	CD	S,IM	IM + IBD-AID	HBI	12	2
24	F	CD	S,ASA, IM, aTNF	S(taper), IM + IBD-AID	HBI	15	0
39	M	CD	IM, aTNF	IBD+AID	HBI	20	0
69	M	UC	ASA, IM, aTNF	ASA, IM + IBD-AID	MTLW	n/d	2; "improved"
19	F	UC	S,ASA, IM, aTNF	ASA, IBD-AID	MTLW	6	0
40	M	CD	S,ASA, IM	IM + IBD-AID	HBI	15	2
41	M	CD	ASA, IM	IM + IBD-AID	HBI	4	2
37	F	CD	S,ASA, aTNF; elemental diet	aTNF + IBD-AID	HBI	1	1; histologic remission
70	F	UC	ASA, IM, aTNF	aTNF + IBD-AID	MTLW	8	0

Therapy Legend: S=steroid dependant, ASA= 5-ASA derivatives, IM=immunomodulator, aTNF=Anti-tumor necrosis factor antibody

Conclusion

This case series indicates the potential for the IBD-AID to be used as an adjunctive or alternative therapy for the treatment of IBD. Notably, *9 out of 11 patients were able to be managed without anti-TNF therapy*, and 100% of the patients had their symptoms reduced. To make clear recommendations for its use in clinical practice, randomized trials are needed alongside strategies to improve acceptability and compliance with the IBD-AID.