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Pilot Testing a Novel Treatment for Inflammatory Bowel Disease

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Presenter Information
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Pilot Testing a Novel Treatment for Inflammatory Bowel Disease

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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

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**

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

**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:**

- **Probiotic Foods**
  - Aged cheeses
  - Dark chocolate
  - Fermented cabbage
  - Kefir
  - Miso soup
  - Pickles
  - Yogurt (active)

- **Prebiotic Foods**
  - Artichokes
  - Asparagus
  - Bananas
  - Chicory root
  - Garlic
  - Honey
  - Leeks
  - Oats
  - Onions

**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.