Probiotics as an Adjunct Treatment to Standard Therapy in Ulcerative Colitis
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INTRODUCTION

Ulcerative colitis (UC) causes an estimated 6 cases per 100,000 individuals annually. Many factors contribute to the development of UC including the patient’s genetics, immune system, and environmental factors. Symptoms vary based on severity of UC but often include rectal bleeding, multiple episodes of diarrhea per day, cramping abdominal pain, tenesmus, and constipation. The diagnosis of UC is made based on a person experiencing chronic diarrhea for more than 4 weeks, evidence of inflammation on endoscopy, and chronic inflammatory changes on biopsy.

The treatment of UC largely depends on the location and severity of disease, however 5-aminosalicylic acid (5-ASA) containing medications tend to be the initial treatment for most patients with mild to moderate disease. In addition to standard treatment, probiotics are also used as an adjunct therapy for UC and other gastrointestinal disorders.

CLINICAL QUESTION

In patients older than 13 years old with ulcerative colitis (UC), does probiotic and conventional treatment or conventional treatment alone reduce the rate of relapse?

METHODS

This PowerPoint 2007 template produces a 36”x48” poster. Move this graphic placeholder onto your poster, size the poster to add a new body of text. Use section headers to separate topics or concepts to the poster area to add another section header. Move this preformatted section header placeholder the poster area, size it, and click it to edit. Elements to your poster: Drag a placeholder onto PosterPresentations.com (copy and paste the link into your web browser). View our online tutorials at: http://www.posterpresentations.com/quickstart/quickstart.html.

RESULTS

Table 1: Overall Comparison of Reviewed Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Objective</th>
<th>Study Type</th>
<th>Sample Size</th>
<th>Study Treatments</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study #1 Yoshimatsu, et. al.</td>
<td>To determine if the use of probiotics in addition to conventional UC treatment was more effective in maintaining remission in patients with inactive UC as compared to conventional treatment alone.</td>
<td>Double-blinded RCT</td>
<td>n = 46 (23, 23)</td>
<td>Bio-Three</td>
<td>Mesalazine and Salazosulfapyridine</td>
</tr>
<tr>
<td>Study #2 Tursi, et. al.</td>
<td>To investigate if the use of VSL#3 as an adjunct to standard therapy is more effective in treating mild to moderate UC compared to UC standard therapy alone.</td>
<td>Double-blinded RCT</td>
<td>n = 144 (71,73)</td>
<td>VSL#3</td>
<td>Mesalazine</td>
</tr>
<tr>
<td>Study #3 Palumbo, et. al.</td>
<td>To evaluate the long-term efficacy of a combination therapy (mesalazine plus a probiotic blend) compared to mesalazine alone in treating UC.</td>
<td>RCT</td>
<td>n = 60 (30,30)</td>
<td>Probiotic blend</td>
<td>Mesalazine</td>
</tr>
</tbody>
</table>

Follow Up Periods | 1 year | 8 weeks | 2 years

Conclusion

- After 12 months, 56.6% of the placebo group (12 patients) remained in remission, whereas 69.5% of the Bio-Three group (16 patients) remained in remission (p<0.05)
- After 8 weeks, 47.4% of the VSL#3 group resulted in remission, while 32.4% of the placebo group resulted in remission (p= 0.069)
- After 2 years, there was a significant difference in UC disease activity index, stool frequency, intestinal mucosa, and rectal bleeding (p<0.05) between the two groups taking the probiotic blend and the placebo group.

NNT

- NNT= 8
- NNT= 5
- NNT unobtainable

Strengths

- RCT, double-blinded, wide age range used.
- RCT, double-blinded, large sample size.
- RCT, longer follow up period

Limitations

- Small sample size, short follow up, may not be generalizable to other patient populations.
- Short follow up and may not be relevant to other patient populations.
- Small sample size, not double-blind, poor compliance of subjects.

CONCLUSION

This systematic review did not show strong evidence in support of probiotic supplementation for UC patients. However, due to trial design and limited number of patients, a potential benefit to probiotics may exist despite inconclusive results in these studies. While it appears that probiotics do not pose any additional risk to individuals with UC, until large randomized trials are performed, we cannot recommend or discourage the use of probiotics.

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REFERENCES