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A Diet Modification Intervention for Older Women with Fecal Incontinence

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INTRODUCTION

Fecal incontinence (FI) is a distressing condition that affects at least 15% of older community-dwelling women. (1) Diet modification is one of the most common recommendations made for women with FI. (2) However, evidence for dietary modifications to treat FI is limited and patients report receiving inadequate therapeutic advice on how to modify their diet. (3) Further, the diet of older women differs significantly from that of younger women. (4) A dietary intervention tailored for older women could serve as a valuable first-line treatment for FI. The goal of this project was to develop and pilot a diet modification intervention specifically for older women with FI.

METHODS

A conceptual framework for the dietary intervention was created using the combined results of behavioral change theory framework, a systematic review on dietary interventions for FI (5), and findings from a previously published focus group-based study. (6) (Table 1) An advisory group with expertise in geriatrics, nutrition, urogynecology and

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UA: study concept and design, acquisition of subjects and/or data, analysis and interpretation of data, and preparation of manuscript
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NK: analysis and interpretation of data, and preparation of manuscript
YB: acquisition of subjects and/or data, analysis and interpretation of data, and preparation of manuscript
CC: analysis and interpretation of data, and preparation of manuscript
NE: acquisition of subjects and/or data, analysis and interpretation of data, and preparation of manuscript
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gastroenterology was developed to provide input on the intervention and to ensure that the intervention materials were compatible with national, demographic-specific, and nutritional recommendations. The process resulted in the creation of two educational booklets entitled "*Dietary Management for ABL", "Ways to Naturally Increase Dietary Fiber"* and *"Food and Bowel Journal" (*Supplementary Appendix S1*)*. All intervention material was evaluated to meet national reading level guidelines and were reviewed in multiple cycles of iteration with the advisory group and patients.

We conducted a single-arm pre-post intervention study to assess the intervention. We recruited community-dwelling women 65 years and older from the Urogynecology and Geriatric clinics. Inclusion criteria were: FI, defined as any uncontrolled loss of liquid or solid fecal material that occurs at least monthly, over the last 3 months that is bothersome enough to desire treatment, adequate mobility for independent toileting, and ability to control her diet and make adjustments. Following determination of eligibility, participants were instructed to complete the 7-day food and bowel journal. The journal was reviewed by a single physician, a female urogynecologist, who provided personalized feedback on dietary triggers as well as encouragement to adhere to the instructions in the booklet. Participants were instructed to adhere to the intervention for 6 weeks. We assessed the change in St. Mark's Vaizey and Patient Global Impression of Improvement (PGI-I) scores. The Vaizey scale is a validated patient-reported instrument that measures symptom severity. Scores range from 0–24, with higher score representing worse symptoms and a meaningful clinical difference of 4–5points. (7). The PGI-I is a single item 7-point scale that asks the patient to rank their impression of their bowel control at the end of the study compared to baseline on a scale of 1 (very much better) to 7 (very much worse). (8) Paired t-test (or paired-sample Wilcoxon signed rank test) was used to compare baseline and post-intervention outcomes using Stata (version 13: Stata Corp, College Station, TX).

RESULTS

The final structured diet modification intervention consisted of the two booklets, the 7-day food and bowel journal and a structured process through which providers and patients interact to assess and implement dietary changes. Of 55 women screened, 48 were consented and enrolled, and 39 completed the intervention.. Mean age and BMI were 72.3±6.6 years and 29.3±7.3 kg/m2, respectively. 75% were White, 21% were Black and 4% did not report race. Baseline bowel journal data suggested moderate symptoms with mean of 5.3±5.4 bowel accidents/week.

The mean Vaizey score decreased (improved) from pre-intervention: 12.3 ± 4.5 to post-intervention: 10.1 ± 0.2; a mean reduction in score of 2.3 points, p=0.01. In response to the PGI-I question, participants provided the following responses: very much better (5/39, 12.8%); much better (12/39, 30.8%); a little better (12/39, 30.8%); no change (9/39, 23.1%), a little worse (0/39, 0%), much worse (1/39, 2.6%), very much worse (0/39, 0%).

DISCUSSION

Based on a conceptual framework and using an iterative approach with the ongoing involvement of engaged stakeholders, we developed a structured diet modification intervention for the management of FI in older women. Our intervention provided demographic-specific and evidence-based dietary modification advice. We found statistically significant improvement in FI symptoms measured by the Vaizey scale, although it did not reach the MID, and a majority reported improvement in symptoms on the PGI-I scale. These results suggest that our structured diet modification intervention improves FI symptoms and could potentially be incorporated into the management of FI in older women.

Prior studies suggest that geriatric and women's health providers lack training in diet analysis and diet modification which is generally considered the purview of nutritionists. (9) However, older women with FI are looking to obtain reliable diet modification advice from their health care providers. (6) We have developed a simple but structured dietary intervention that could possibly be implemented by a wide range of providers who take care of women with FI. A larger trial with longer follow-up is needed to establish the effectiveness and durability of improvement of the intervention.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1:

Important strategies and concepts for diet modification intervention for older women with FI.

Strategies to include in diet modification intervention •**Overall balanced diet**: Overall diet impacts quality of life and being mindful of the amount and frequency of meals helps manage fecal incontinence symptoms. •**Trigger identification and elimination**: Avoidance of triggers affects fecal incontinence symptoms; some foods (i.e. caffeine) are triggers for most patients but the overall process of identifying food triggers is iterative and personal. •**Food preparation**: Modifications to how food is prepared impacts fecal incontinence symptoms; avoid frying and excessive seasoning and spices. Preparing one's food (vs eating out) allows greater control. •**Planning ahead**: Restricting one's diet to manage fecal incontinence symptoms may not always be possible or desirable. Conscious indulgence of possible triggers should be done while at home or with comfortable access to a restroom •**Mindful fiber intake:** Consuming dietary fiber in adequate amounts helps with controlling fecal incontinence. Concepts to include in diet modification intervention •**Structure**: Older women with FI expressed a need for a structured program that presents dietary modification information in a systematic manner. •**Support**: Older women with FI want their health care providers to give them diet information and provide support and engagement during the process of changing her diet. •**Flexibility**: Women expressed that it was important that the dietary recommendations allow flexibility (and not be unduly restrictive) so that they can still enjoy food. •**Access**: Women need easy access to recommended foods with attention to the following themes: availability, cost, and ease of preparation •**Shared Experience**: Women expressed that sharing information was important and they were most interested in dietary modifications that have helped women similar to them.