

Efficacy of Newly Developed Kombucha-Based Specialized Food Product for Treatment of Constipation-Predominant Irritable Bowel Syndrome

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Objectives: Aim: to assess the efficacy of kombucha-based specialized food product, enriched with inulin in patients with constipation-predominant irritable bowel syndrome.

Methods: The study (NCT05164861) was approved by LEC and enrolled subjects with constipation-predominant irritable bowel syndrome (according to ROME IV). The subjects were randomized to receive either 220 ml of a non-alcoholic drink, based on pasteurized kombucha (KG), enriched with inulin (1.15 g/100ml) or 220 ml water (control group, CG), for 10 days. Except study product, subjects were advised to follow their usual diet. Standard examination included evaluation of stool frequency (bowel movements per day), stool form (with the Bristol stool scale) and evaluation of concomitant symptoms (abdominal pain/discomfort, abdominal fullness, bloating, and feeling

of incomplete bowel emptying) with the use of 5-point Likert scale before (BL) and 10 days after the start of intervention (EOT).

Results: The complete data of 40 subjects were available for the analysis. Significant increase of stool frequency was found at the EOT compared to BL in KG (n = 20), Mean ± SD: 0.60 ± 0.31 to 0.85 ± 0.19 times/day; p = 0.004, while there was no change in CG (n = 20): 0.63 ± 0.33 vs 0.72 ± 0.28, p > 0.05. Mean values of stool scale form increased in KG (2.95 ± 1.15 to 4.4 ± 0.97; p = 0.001), while remained unchanged in CG (2.94 ± 1.2 vs 3.4 ± 1.2, p = 0.6). Mean values of the Bristol stool scale in KG and CG differed significantly at EOT (p = 0.018). Significant decrease in mean values of incomplete bowel emptying feeling was found in KG (1.88 ± 0.78 at BL vs 1.41 ± 0.56 points at EOT, p = 0.015), but not in the control group. There was no difference in patient's reports for other symptoms between KG and CG.

Conclusions: New specialized kombucha-based drink enriched with inulin is well-tolerated and increases stool frequency and consistency in patients with constipation-predominant irritable bowel syndrome.

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