Fecal Microbiota Transplant: Could it be an Effective Choice in Irritable Bowel Syndrome?

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Irritable Bowel Syndrome (IBS) is a common problem facing gastroenterologists and primary care physicians, its prevalence ranged between 10 to 20 % of the population worldwide **[1]**. IBS is chronic abdominal pain that occurs in association with changed bowel habits and absence of organic disease by prudent use of tests **[2]**. Several pathophysiological factors interact and contribute to pathogenesis of IBS, including visceral hypersensitivity, altered gastrointestinal (GI) motility, disturbances in gut-brain interaction, and psychological distress. Alteration in the microbiome is an evolving issue that may affect intestinal immune activation, increased intestinal permeability, and food hypersensitivity with a focus on gut luminal factors **[3]**. Dealing with IBS includes general measures to control environmental, social, or psychological factors such as foods, medications, hormones, and stress. Diet modification in the form of (FODMAP) diet, Psyllium, alternative therapies such as peppermint oil are recommended. While Pharmacologic Measures may include; antispasmodic agents, antidiarrheal agents, anticonstipation agents, psychotropic agents, serotonin receptor antagonists, non-absorbable antibiotics, and probiotics. Also, cognitive behavioral therapy and hypnotherapy are suggested psychological therapies. The choice of pharmacological treatments is directed by the nature of the IBS symptoms **[4]**. Resuming microbiome in IBS through prebiotics, probiotics, synbiotics or fecal microbiota transplant (FMT) was suggested **[5]**. The results of FMT in patients with IBS were conflicting, some studies found it beneficial **[6,7]** and others did not **[8,9,10]**.

Ahmed MM et al., 2022 reported that using fecal microbiota transplant (FMT) as a method of treatment of IBS is an effective choice and they published an article in the current issue of the Afro-Egypt J Infect Endem Dis with the title **"Effect of Fecal Microbiota Transplant versus Conventional Medications in Treatment of Irritable Bowel Syndrome"**. The study included 30 patients with IBS symptoms, patients were classified into three groups: group A: healthy donors, group B: patients who received Mebeverine and Simethicone and group C: patients who were managed by FMT. Females predominate the diseased groups, although all groups were matched as regard BMI, the control group or donors had obese individual. The diseased groups were matched as regard the type of IBS. After 2 weeks from treatment modalities, there was a trend for pain frequency decrease with clinical improvements in the pain score. This improvement was regressed in group B. IBS-severity scoring system (IBS- SSS) was improved significantly after 2 weeks and 1 month. The improvement in the quality of life was 47.74 and 82.57 in group B and group C, respectively after 2 weeks while it became 26.14 and 79.57 after 1 month. Post prandial abdominal pain decreased progressively in the diseased groups with statistically

significant difference among the groups. Constipation-predominant patients showed a significant trend for improvement over the study period, while diarrhea in other patients had significant improvement after one month. After one month flatulence significantly decreased in diseased groups without intergroup significance. The flatulence score has been decreased after 2 weeks in group B and C then increased in group B by the end of one month.

Brave authors succeeded to convince the patients with an extraordinary treatment modality in a trail to find a master key for multiple locks in pathogenesis of IBS, after an informed consent, it is not mentioned if it was open labeled or not. The microbiome can affect our digestion, immunity, metabolism, development and even our behavior [11]. The low bacterial diversity may contribute to the pathophysiology of IBS [6]. Ahmed and his colleagues took (control group) healthy individual and they were the donors, it was surprising to include 2 obese individuals in the donor group as obesity is known by alterations in the composition and function of the gut microbiome [12]. The authors have clarified the investigations to exclude organic diseases for IBS diagnosis but those that insure the safety of FMT were not clearly declared. They included mixed subtypes of IBS regarding symptomatology which affect the choice of treatment regimen and they considered antispasmodics and antiflatulence as the conventional treatment. They gave a comment on bowel habits bring to our mind the up and down nature of the disease or other factors that might influence the disease course. Also, the dietary pattern of the 3 groups was not mentioned. As regard data handling, it would be better in such multifactorial issue to add paired analysis before and after intervention in the same group, this could fix the unknown personal factors such as genetics or environmental factors.

Overall the study opened the gate for further studies that meticulously investigate FMT as regards donor selection criteria, stool dose, and route of administration, using more objective parameters such the effective bacterial signature or microbiome diversity, hoping to reach future safe, selective and effective FMT.

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