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Review of Consecutive Patients Treated with a Combination of Vancomycin and Rifaximin for Diarrhea Predominant Irritable Bowel Syndrome (IBS-D)

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Abstract : Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder that affects an estimated 11% of the population globally with the most predominant symptoms being abdominal pain, bloating and altered bowel movements. All age groups suffer from IBS although the prevalence of IBS decreases for age groups over 50 years. Women are more likely to suffer from IBS than men. IBS can be categorized into 3 groups based on the type of altered bowel movement: diarrhea-predominant IBS (IBS-D), constipation-predominant IBS (IBS-C) and IBS with mixed bowel habit (IBS-M). The contribution of the gut microbiome to the etiology of IBS is becoming increasingly recognized with rising use of anti-microbial agents. Previous studies on vancomycin and rifaximin used as monotherapy or in combination have been conducted mainly on IBS-C and showed marked improvements in the symptoms. According to our knowledge, no studies reported using these two combinations of antibiotics for IBS-D. Here, we report a consecutive cohort of 18 patients treated with both vancomycin and rifaximin for IBS-D. These patients' records were reviewed retrospectively. In this cohort, patients ages were between 24-74 years (mean 44 years) and 9 were female. Baseline all patients had diarrhea, 4 with mucus and one with blood. Patients reported other symptoms were abdominal pain (n=11) bloating (n=9), flatulence (n=7), fatigue (n=4) and nausea (n=3). Patients treatments were personalized according to their symptom severity and tolerability and were treated with combination of rifaximin (500 - 3000mg/d) and vancomycin (500mg - 1500mg/d) for an ongoing period. Follow-ups were conducted between 2-32 weeks' time. Of all patients, 89% patients reported improvement of the symptoms, 1 reported no change and 1 patient's symptoms got worse. The mechanism of action for both vancomycin and rifaximin involves the inhibition of bacterial cell wall and protein synthesis respectively. The role of these medications in improving the symptoms of this cohort suggests that IBS-D may be microbiome infection driven. In this cohort, similar patient presentations to Clostridium difficile, as well as symptom improvement with the use of rifaximin and particularly vancomycin, suggest that the infectious agent may be an unidentified Clostridium. These preliminary results offer an alternative etiology for IBS-D not previously considered and open the avenue for new research.

Keywords : clostridium deficile, diarrhea predominant Irritable Bowel Syndrome, microbiome, vancomycin/rifaximin combination
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