Microbiota Dynamics in Patients Treated with Fecal Microbiota Transplantation for Recurrent *Clostridium difficile* Infection


Abstract

*Clostridium difficile* is among the leading causes of hospital-acquired infections, and it is responsible for pseudomembranous colitis and antibiotic-associated diarrhea. Clinical and scientific communities have raised concern about the need for an alternative approach to antibiotic therapeutic options, which is among the current method used to treat those who have recurrent *C. difficile* infection (RCDI). The alternative treatment of fecal microbiota transplantation (FMT) may help patients with RCDI to restore their gut microbiome to its homeostatic state and improve their overall health. This study by Song et al. investigates the effects of transplanted microbiota and whether FMT can successfully reduce or treat RCDI individuals. 14 pairs of healthy donors and RCDI individuals who were successfully treated with FMT were analyzed by their fecal microbiota using 16S rRNA gene amplicon pyrosequencing method. This analysis showed that RCDI patients may be associated with having a reduced diversity fecal microbiota and that post-FMT may help restore their microbiota. By restoring the diversity in the microbiota, the result shows that there is an increase in the patient’s overall health with the disappearance of diarrheal symptoms.

Reference: