

中文題目：腸道正常菌落移植於腸道疾病治療之臨床經驗-案例報告

英文題目：Application of fecal microbiota transplant in gastrointestinal disease-Cases report

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Introduction

Human gut microbiota is a complex community with over 100 trillion microbial cells which influence human physiology, metabolism and immune function. A healthy gut flora is largely responsible for overall health of the host and disruption to the gut microbiota has been linked with gastrointestinal disease such as inflammatory bowel disease and infectious disease. There has been growing interest in the use of fecal microbiota transplantation(FMT) for the treatment of patients with chronic gastrointestinal infections and inflammatory bowel disease. Here, we present the clinical experiences of FMT in ulcerative colitis and *Clostridium difficile* infection.

Case Presentation

Case-1

A 42-year-old man was diagnosed ulcerative colitis, E3, 20 years ago with initial presentation of pancolitis and toxic megacolon. In past decade, UC was management with 5-ASA(oral+enema), oral steroid. However, intermittent disease flared up with bloody stool, sever anemia with transfusion request and steroid dependent was encountered. On 2015-5, he received with aggressive medical treatment with azathioprine and adjuvant fecal microbiota transplantation(colonoscopy) from his daughter after serum screening with hepatitis B/C, HIV, syphilis; stool examination with parasite. After that, his clinical condition got stable without transfusion request and steroid was tapered(Fig A).

Case-2

A 85 year-old female was a case of dementia and Parkinsonism. On 2017-1, she was admitted for urinary traction, bed sore and various antibiotics were prescribed for infection control. However, sever watery diarrhea was encountered during admission and stool toxin A+B and colonoscopy proved *Clostridium difficile* infection. Initial treatment included metronidazole/vancomycin but recurrent *Clostridium difficile* infection complicated with sever diarrhea, hypovolemic shock was noted in the following 3 months. On 2017-5, she received fecal microbiota transplantation (Duodenal infusion) from her son after serum screening with hepatitis B/C, HIV, syphilis; stool examination with parasite. In the following 3 months, her condition got stable without admission.(Fig B)

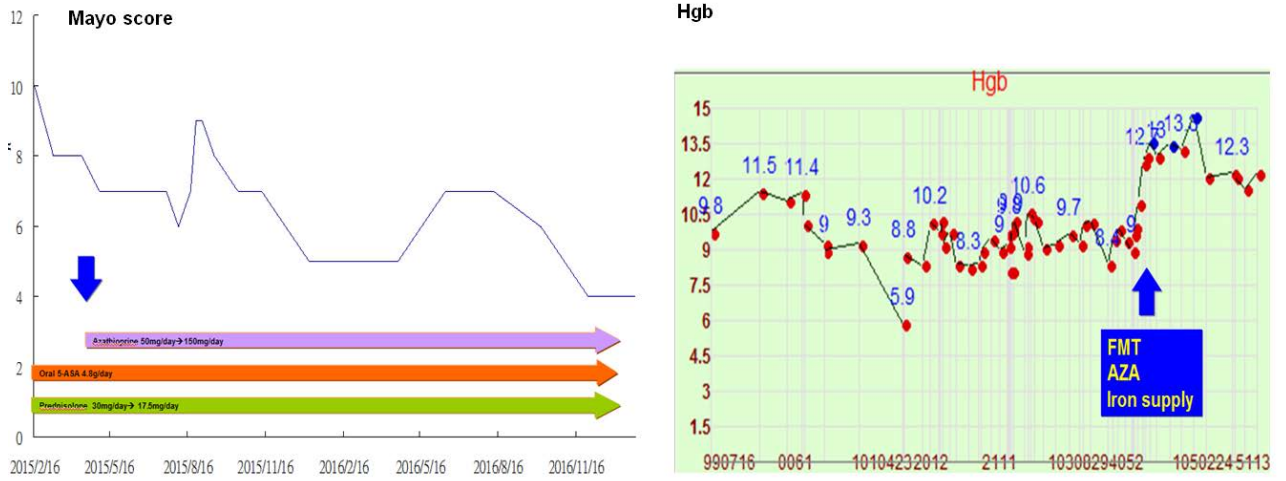
Discussion

The possible applications for FMT include diseases associated with dysbiosis such as inflammatory bowel disease and *Clostridium difficile* infection. The goal of FMT is to treat the patient's condition by restoring their gut microbiota from health donor fecus. With careful screening of potential donors with a rigorous qualifying examination, testing for infectious disease and other problems, FMT could be low risk, high efficiency treatment for certain gastrointestinal disease. It could be an adjunct to conventional treatments. However, large randomized, controlled clinical trials would be beneficial in determining the impact of FMT therapy and it application.

Figure

(A) Clinical severity (Mayo score) and hemoglobin of sever ulcerative colitis case

Case -1



(B) Clinical course, antibiotics exposure and treatment of *Clostridium difficile* infection

Case 2

