Published in final edited form as:

Ann Intern Med. 2013 May 21; 158(10): 779–780. doi:10.7326/0003-4819-158-10-201305210-00021.

Fecal Microbiota: Therapy for recurrent *Clostridium difficile* infection in two HIV-infected individuals

Latesha Elope, M.D.¹ and Martin Rodriguez, M.D.²

^{1,2}University of Alabama at Birmingham, Division of Infectious Diseases, Birmingham, Alabama

Abstract

We report 2 cases of successful use of fecal microbiota therapy (fecal transplant) for recurrent *Clostridium difficile* infection in HIV-infected individuals. Both patients had many recurrences despite antibiotic therapy and improved after receiving fecal microbiota from healthy donors.

Recurrent *Clostridium difficile* infection (CDI) is a common and difficult to manage problem. The risk of recurrence after a first episode is estimated to be around 20–30%, and is even higher after second or later recurrences^[1]. A disrupted fecal microbiota from previous use of antibiotics plays a major role in recurrent CDI^[1]. Because of the high rate of recurrence, many different treatment alternatives have been proposed^[1]. In recent years several cases of successful use of fecal microbiota therapy (FMT) in the treatment of recurrent CDI have been published, with a reported success rate over 90%^[1]. Here we present what to our knowledge is the first report of FMT in HIV-infected individuals.

Cases

Case 1: 48-year-old man with AIDS on HAART (last CD4 count of 125 and viral load <50 copies/mL) with history of multiple opportunistic infections presented with recurrent diarrhea for the previous 8 months secondary to CDI. Each episode was treated with metronidazole or vancomycin, but after discontinuing therapy the disease recurred. A vancomycin taper was tried without success. After 5 relapses the patient was informed about the previous use of FMT in recurrent CDI and gave consent for FMT. His mother donated a sample and he received FMT through a nasogastric tube, using a previously described protocol^[2]. The day after the procedure the patient had complete resolution of symptoms. There were no side effects. At 5 years of follow up he continues to do well without further recurrences.

Case 2: 48-year-old female with AIDS on HAART (last CD4 count of 15, viral load of 320 copies/mL), and type II diabetes mellitus, was admitted to the hospital for recurrent CDI. The patient had 5 episodes of CDI, improved on vancomycin each time but the disease recurred after discontinuation of therapy. She gave consent for FMT and the procedure was performed through a nasogastric tube, in similar fashion as the first case^[2]. Her son was the donor. The following day the symptoms improved and she was discharged. At 6 weeks of

follow up the patient continues to do well. In both cases the patients received vancomycin until the evening prior to receiving FMT.

Discussion

C. difficile infection is a frequent cause of nosocomial diarrhea and commonly recurs after initial therapy. Recurrent episodes can be treated with metronidazole or vancomycin, however, further recurrences frequently occur and are difficult to manage. A variety of interventions have been proposed in this situation, including pulsed or tapered regimens of vancomycin but failures are common^[1,3].

Fecal microbiota therapy works by restoring the natural microbiota in the recipient. In a recent systematic review, FMT showed resolution of symptoms in 92% of cases^[1]. The procedure includes testing the donor for infections that could be transmitted to the recipient, preparation of the sample the same day of the procedure, and administration via oral (EGD or nasogastric tube) or colonic (enema or colonoscopy) routes. The efficacy of FMT has not been tested in randomized studies, however, the number of successful reports continue to grow. In the published cases the procedure appears to be very safe without reported significant side effects. Most cases involved immunocompetent individuals. While there have been reported cases of FMT in allogeneic stem cell transplant recipient, we have found no reports in HIV-infected individuals. Although not commonly recognized, *C. difficile* is frequently seen in patients with HIV^[3]. The association may be explained by frequent exposure to antibiotics and an impaired ability to produce antibodies against *C. difficile* toxin^[3]. Here we have reported the successful and safe use of FMT in two patients with AIDS and recurrent CDI. We believe the use of FMT should be considered in similar patients with recurrent episodes of CDI after standard therapy has failed.

References

1. Gough E, Shaikh H, Manges AR. Systematic Review of Intestinal Microbiota Transplantation (Fecal Bacteriotherapy) for Recurrent *Clostridium difficile* Infection. Clin Infect Dis. 2011; 53:994–1002. [PubMed: 22002980]
2. Aas J, Gessert CE, Bakken JS. Recurrent *Clostridium difficile* colitis: case series involving 18 patients treated with donor stool administered via a nasogastric tube. Clin Infect Dis. 2003; 36:580–585. [PubMed: 12594638]
3. Sivapalasingam S, Blaser MJ. Bacterial diarrhea in HIV-infected patients: why *Clostridium difficile*, and why now? Clin Infect Dis. 2005; 41:1628–1630. [PubMed: 16267736]