Fecal Microbiota Transplantation in Patients With Cancer Undergoing Treatment

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Fecal microbiota transplantation (FMT) is a technique used to restore the normal body flora to the gut in cases of *Clostridium difficile* infection (CDI). It involves instillation of the stool of a healthy donor through a nasogastric tube or colonoscopy into the gastrointestinal tract of the patient. More research is needed to determine the parameters of FMT use in patients with cancer.

At a Glance

- CDI is common in patients with cancer because of the frequent use of broad-spectrum antibiotics that can alter the normal microbiota in the gastrointestinal tract.
- CDI recurrences frequently occur and can be difficult to treat.
- CDI can delay continued treatment, prolong hospitalizations, and greatly affect patients’ quality of life.

Case Study

B.J., a 39-year-old man with T-cell acute lymphocytic leukemia who was treated with adolescent and young adult protocol, was diagnosed with CDI soon after starting induction therapy. He was initially treated with oral vancomycin and IV metronidazole, which resolved his infection.

Several months later, B.J. was admitted to the hospital with neutropenic fever, nausea, vomiting, and diarrhea. B.J. was given IV ceftepime and IV vancomycin. A stool culture tested positive for *C. diff* toxin, and B.J. was then administered high-dose oral vancomycin and IV metronidazole. Diarrhea and other symptoms persisted, so B.J. was given oral fidaxomicin. Symptoms continued despite aggressive treatment. Because of recurrence of the CDI, the failed standardized multidrug treatment for CDI, and continued diarrhea symptoms, the physicians and patient agreed to treat the infection with an FMT.

After receiving standard bowel preparation the evening prior, FMT was completed by colonoscopy. Immediately following the procedure, B.J. began to experience relief of symptoms. He reported decreased nausea, vomiting, and diarrhea. B.J. was treated with oral fidadomicin and IV metronidazole. Diarrhea and other symptoms persisted, so B.J. was given oral fidaxomicin. Symptoms continued despite aggressive treatment. Because of recurrence of the CDI, the failed standardized multidrug treatment for CDI, and continued diarrhea symptoms, the physicians and patient agreed to treat the infection with an FMT.

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