Tempered Enthusiasm for Fecal Transplant

To the Editor—The attraction of fecal microbiota transplant (FMT) as a treatment for *Clostridium difficile* infection (CDI) is based on reported efficacy and safety [1, 2]. At our institution, we had used FMT in 10 refractory cases without complication. Our most recent FMT has tempered our enthusiasm.

A 68-year-old man with advanced oropharyngeal cancer necessitating gastric tube (G-tube) feeding, diabetes mellitus, and coronary artery disease was treated twice in the preceding 6 months at another institution for severe CDI. His first episode had been complicated by shock and was treated with intravenous metronidazole, fidaxomicin, and a prolonged taper of vancomycin. Subsequently, he relapsed with *C. difficile*-associated septic shock (toxin positive, pseudomembranes). This second life-threatening episode was treated with intravenous metronidazole, fidaxomicin, and tigecycline as well as intravenous daxomicin. After 18 days, the patient transferred to our hospital for FMT.

On arrival he was afebrile, hemodynamically stable, and in no distress, but was having frequent loose stools. His abdomen was moderately distended without tenderness; anasarca was noted. A G-tube was in place. His white blood cell (WBC) count was 9.7 × 10⁹/µL, creatinine level was 1.4 mg/dL, and stool *C. difficile* polymerase chain reaction (Cepahcid) was positive. Abdominal computed tomography (CT) demonstrated diffuse pancolitis without dilatation. He was receiving fidaxomicin via G-tube and intravenous metronidazole. After obtaining consent from the patient, we proceeded with FMT.

The spouse served as the donor. As per our protocol, she was screened for human immunodeficiency virus, hepatitis A, B, and C viruses, cytomegalovirus, and *C. difficile*. Sixty grams of donor stool was mixed with 70 mL of saline, filtered twice, and infused via a gastrojejunostomy tube placed through the G-tube. The position of the tip of the gastrojejunostomy tube near the ligament of Treitz was confirmed by contrast injection under fluoroscopy and routine abdominal radiography just prior to the fecal instillation. The procedure itself was uncomplicated, and all antimicrobials were stopped after the FMT. During the first 48 hours after FMT, the patient had no abdominal pain, he was afebrile and hemodynamically stable, and his stools were “thicker” than before FMT.

Early on the third day after FMT, the patient noted recurrent abdominal pain. He was newly hypotensive (blood pressure 68/41 mm Hg), tachycardic (140 beats per minute), and tachypneic (28 breaths per minute). His WBC count was 600 × 10⁹/µL, and blood cultures grew *Pseudomonas aeruginosa, Escherichia coli*, and *Lactobacillus casei*. A CT scan revealed a dilated colon (10 cm) and pneumoperitoneum. During an emergent surgical procedure, it was found that the G-tube was dislodged, producing the free air; there was no bowel perforation or overt peritonitis. The massively dilated colon was resected, but the patient’s septic shock proved refractory to aggressive intensive care and he died on the fourth day after FMT.

One of the selling points of FMT for refractory CDI has been its safety. To our knowledge, only a single case of attributable death (due to aspiration pneumonia) has been reported after FMT [3]. Our patient decompensated with toxic megacolon and shock 48 hours after FMT. The reason for this precipitous decline is unclear. Perhaps the abrupt discontinuation of *C. difficile* therapy after FMT contributed, but to continue antimicrobials after FMT seemed counterintuitive. Following this death, we have modified our FMT consent form to include the possibility of catastrophic post-FMT colitis, sepsis, and death.

**Note**

**Potential conflicts of interest.** All authors: No reported conflicts.

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