**AYC Medical Matters**

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**Study: Fecal Transplants Cure Serious Infection**

By Cynthia Billhartz Gregorian, St. Louis Post Dispatch

The thought of taking human feces from one person and pumping it into another makes most people’s stomachs churn.

But it looks like it might be the best way to treat a severe and stubborn intestinal infection that kills about 14,000 people in the United States each year.

A study published Wednesday in the New England Journal of Medicine found that fecal transplants cured 15 of 16 people who had recurring infections with Clostridium difficile bacteria. Meanwhile, only seven of 26 patients in two control groups were cured with antibiotics.

Physicians and researchers believe that fecal matter transplanted from a healthy person restores the normal balance of bacteria.

The study, which was conducted at the Hagaziekenhuis hospital in The Hague, was the first to compare fecal transplants and antibiotics head-to-head. But it wasn’t the first time the transplants have been done. Not by a long shot.

Fecal transplants date to at least 4th-century China, when people with food poisoning ingested fecal matter, according to a Washington University doctor who has studied the process. In 1958, doctors outlined for the first time the successful use of fecal enemas to treat antibiotic-associated colitis in four patients. The treatment is used to treat gut trouble in farm animals.

Dr. Matthew Ciorba, assistant professor of gastroenterology at Washington University, was excited by the study’s findings because he and other physicians at Washington University had been preparing to begin using fecal transplants for patients with recurrent C. difficile this spring.

“We’re going to start offering it because it works,” he said. “It’s been shown to work across different countries, different centers, different investigators and different populations. The success rate is 80 to 90 percent, which is unheard of.”

Antibiotics are the most common cause of C. difficile, because they destroy healthy bacteria in the gut. When that happens in patients and they’re exposed to C. difficile, a common bacteria in hospitals, infection sets in. Patients experience fever, diarrhea, severe abdominal pain, bloody stool and weight loss. They often must endure long stays in intensive care.

Typically, doctors treat C. difficile with more antibiotics, but about 20 percent of people relapse. And of those patients an even higher percentage have a recurrence.

Typically, patients are asked to find their own donors, who are then tested for a long list of communicable diseases. The fecal matter is then run through a blender with a saline solution.

The patient drinks Colyte, also known as “Go-Lightly” prep, a solution used to clean out the colon before colonoscopies. Then the fecal matter is infused into the colon either through a colonoscope, enema or a tube inserted through the nose and into the colon.

Some patients have even been instructed on how to do it at home.

Katherine Holzem, a student in the medical-Ph.D. program at Washington University, contracted C. difficile in May 2011, while hospitalized for Crohn’s disease. She had five recurrences after that initial bout.

She was so desperate to be rid of it that she and her husband performed three fecal transplants at home.

“There’s an ick factor to just having C. difficile,” she said. “We first attempted it at the suggestion of my physician. She gave us instructions on how to do it. I was willing to do just about anything to have this not be a part of my life anymore.”

Holzem has tested free of C. difficile since March 2012.

The Food and Drug Administration doesn’t regulate the transplants, because fecal matter is organic. But that might change.

“We don’t know yet,” Ciorba says. “This could put a whole new wrench in things for physicians and the patients who would benefit from the procedure.”

The cost also could be an issue. Screening donors can cost more than $1,000 and some insurance companies haven’t wanted to pay for that, Ciorba said.

Researchers at The Hague studied adults who had had at least one relapse of C. difficile after antibiotics. They randomly assigned them to three groups.

Sixteen people took the antibiotic vancomycin for four days and had fecal transplants.

Thirteen people had their intestines rinsed then took vancomycin for 14 days. The third group, also 13 people, had only vancomycin.

In the first group, 13 of the 16 were cured after the first transplant, and two of the remaining three were cured after repeat transplants.

Only seven of the 26 in the other two groups were cured after taking antibiotics. The others relapsed and 18 of them were then given fecal transplants; 15 of them were cured.

The researchers told The New York Times that the study was originally meant to include more patients, but was cut short because the antibiotic groups were faring so poorly compared with the transplant patients that it was considered unethical to continue.

Ciorba and other researchers believe fecal transplants also might be effective in treating other infections, diseases and conditions thought to be caused by bacterial imbalances in the gut.

“This could play a role in everything from diabetes and obesity to autism, anxiety and depression,” Ciorba said.

Holzem says she can’t be certain it was the fecal transplants that cured her, because she didn’t do one after her last recurrence.