Last-ditch method at fighting intestinal superbug

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This photo provided by the Montefiore Medical Center, taken Friday, Dec. 10, 2010, shows Dr. Lawrence Brandt, emeritus chief of gastroenterology, at the medical center in New York. He's among a small but growing number of doctors trying a last-ditch effort to fight an intestinal superbug, by transplanting stool from a healthy person into the sick person's gut. (AP Photo/Montefiore Medical Center)

(AP) -- A superbug named C-diff is on the rise, a germ that so ravages some people's intestines that repeated tries of the strongest, most expensive antibiotic can't conquer their disabling diarrhea.

Now a small but growing number of doctors are trying a last-ditch treatment: Using good bacteria to fight off the bad by transplanting stool from a healthy person into the sick person's colon.

Yes, there's a yuck factor. But reports of several dozen cases in a medical journal and at a meeting of the nation's gastroenterologists this fall suggest that with no more inconvenience than a colonoscopy, people who have suffered C-diff for months, or longer, can rapidly improve.

"This is the ultimate probiotic," says Dr. Lawrence Brandt of New York's Montefiore Medical Center, who has performed 17 of the procedures.

Yet it's much more complex: An entire bacterial neighborhood is transplanted, almost like an organ transplant minus the anti-rejection drugs, says Dr. Alexander Khoruts of the University of Minnesota. He took a genetic fingerprint of the gut bacteria in a woman left emaciated after eight months of severe C-diff. Not only did the diarrhea disappear after a fecal transplant, but that normal bacteria mirroring her husband's - the donor - quickly took root in her recovering intestine.

Here's the caution: Fecal transplants haven't been studied in the way that science requires to prove they work - by comparing similar patients given either a transplant or more intense antibiotics. History is full of failed treatments that doctors thought promising until they were put to a real test.

"There's very good reason to think this fecal transplantation, or bacteriotherapy, might work, but it needs to be proven before everybody starts to do it," stresses Dr. Lawrence Schiller, a gastroenterologist with the Baylor Health Care system in Dallas. He followed reports on the treatment at the American College of Gastroenterology's recent meeting, but hasn't joined the fledgling trend.

C-diff, formally named Clostridium difficile, has become a menace in the nation's hospitals, and can spread outside of them, too. Some patients suffer just mild diarrhea, but others, especially older adults weakened by previous illness, can develop a more severe condition called colitis. There aren't precise counts but some government estimates suggest C-diff may be responsible for as many as 15,000 deaths a year.

Up to a third of patients experience a second infection, and some go on to suffer recurrent bouts. Those worst-case patients are put on increasingly strong doses of the powerful antibiotic vancomycin for weeks, even months, at a time, treatments that Brandt says can cost $2,500 or more with each try.

But because antibiotics kill good germs as well as bad ones, the C-diff can bounce back inside a colon now depleted of the hundreds of species of bacteria that are supposed to live there.

"They're caught in this cycle of treatment and re-treatment," says Minnesota's Khoruts, who has performed 21 fecal transplants since discovering how normal bacteria took over in his first patient in 2008. He's now begun more detailed before-and-after mapping of patients to try to identify whether particular good bacteria are key.

Fecal transplants aren't new - the first was reported in 1958, and they've been performed occasionally ever since. But of 170 cases described in medical journals since then, about a third were published this year, suggesting increased interest as the C-diff problem grows, says Montefiore's Brandt.

Doctors who perform fecal transplants agree that more rigorous research is needed - without it, there's no way to know if only the supposed successes, and not the failures are being written up. Brandt is planning a pilot study.

"I used to say this was just a measure of how desperate patients and their doctors were. There came a time when there was nothing else to do," says Dr. Christina Surawicz of the University of Washington's Harborview Medical Center, before performing her 16th procedure last week.

How are they done? There's no one method. Brandt insists on a list of tests to make sure the donor doesn't have diseases such as hepatitis or HIV, or intestinal parasites. Then the donor, usually a close relative, brings in a fresh stool sample that Brandt liquefies and essentially drips into the patient's colon during a routine colonoscopy.

Insurance companies don't specifically cover fecal transplants, but they do pay for colonoscopies for C-diff patients, Brandt says. The donor's testing can run to several hundred dollars. If insurance does not cover it, the patients pay.

One of Brandt's patients suffered recurrent bouts of C-diff for about 18 months before finding the option. "You start to feel like a leper, quite honestly," says Ruth, a New York woman who asked that her last name not be used. She says she's felt great for two years since getting treated, although "I will tell you I have not taken another antibiotic."