Mid-Maryland Internal Medicine
www.MidMarylandInternalMedicine.com
Tel: (240) 651-0420
Ali Afrookteh, MD
Martha Pierce, MD

Spring, 2019

Frederick Memorial Hospital now Offers Fecal Microbial Transplant Therapy for Treatment of *C. diff*

Clostridioides difficile, commonly referred to as "*C. diff*," is a bacterium that can cause intestinal problems ranging from severe diarrhea to death. Affecting roughly 500,000 Americans each year, *C. diff* infections have begun become more difficult to treat and have started to appear in populations not historically at risk, including younger and healthier patients.

One challenge to treating *C. diff* is that conventional therapy involves the use of antibiotics. However, the antibiotics that can kill *C. diff* also kill the beneficial bacteria in our digestive tracts that would otherwise be fighting *C. diff* naturally. As a result, conventional treatments for *C. diff* infections often make patients more vulnerable to recurring infections. In fact, about 20% of patients who get *C. diff* will get it again.

Enter fecal microbial transplantation as a treatment for *C. diff.* First attempted in humans in 1958, the procedure uses the low-tech approach of populating the affected patient's intestine with fecal material from a healthy person. This allows healthy bacteria to repopulate the patient's intestinal tract and provide a natural resistance to *C. diff*. Fecal microbial transplantation is still in its infancy but it has shown promise for patients with recurrent *C. diff* infections. It is also being investigated as a treatment for other gastro-intestinal conditions, including inflammatory bowel disease and ulcerative colitis.

In January, 2019, Frederick Memorial Hospital announced that it now offers fecal microbial transplantation (FMT) for patients with *C. diff* infections. It is important to note that while FMT therapy for *C. diff* is becoming more widely used (including by the Cleveland Clinic, the Mayo Clinic and Johns Hopkins), it is still considered an "Investigational New Drug" by the Food and Drug Administration. If you become a candidate for FMT, it's important to discuss with your doctor the implications of trying the therapy.

Background

C. diff is a bacterium that already lives in many people's intestines. It also lives in the environment around us, in soil, water and animal feces. Most people never have a problem with *C. diff*, but under some conditions it can begin to grow excessively in your intestines and release toxins that attack the intestinal lining. That's what leads to symptoms of a *C. diff* Infection, which typically include frequent watery diarrhea (up to 15 times a day), severe stomach pain, nausea and loss of appetite.

The most common risk factor for *C. diff* is the use of antibiotics, which can disrupt the growth of normal, healthy gut bacteria. The longer you take antibiotics (and the stronger they are), the greater your risk. Other risk factors that can make a *C. diff* Infection more likely or more severe include:

- Being over 65 years old
- GI or stomach surgery
- Other colon problems, like inflammatory bowel syndrome or colorectal cancer
- A weakened immune system

Transmission

Unlike some other bacteria-caused conditions, *C. diff* bacteria are contagious. They can spread by person-to-person contact and they live for a long time on surfaces, such as toilet seats, telephones and doorknobs. If you have, or know someone who has, a *C. diff* infection, good hygiene can help prevent the spread. This means:

- Wash hands well, using soap and water
- Use disposable gloves when caring for a family member with *C. diff*
- Use chlorine bleach to disinfect surfaces
- Wash clothes with chlorine bleach
- Limit your use of antibiotics if possible

Treatments/Fecal Microbial Transplantation

Traditionally, *C. diff* has been treated with antibiotics. And while antibiotics are effective at eliminating the *C. diff* bacteria, they also kill the helpful bacteria that keep *C. diff* in check in a healthy intestine. That may be one reason why some people continue to develop recurrent *C. diff* infections.

As an alternative to treating recurrent *C. diff* with antibiotics, some institutions are trying FMT as an alternative approach that focuses on cultivating healthy gut bacteria rather than removing it. Here are the basics:

What is it?
FMT uses processed, human stool that is introduced into the patient's system to cultivate a healthy population of gut bacteria.

Who are the donors?
Some physicians use stool from a friend or relative of the patient. Donors are tested for diseases and must meet multiple health criteria. Frederick Memorial Hospital uses stool from OpenBiome, a non-profit organization in Boston dedicated to expanding safe access to FMT. OpenBiome solicits healthy

donor from the Boston area and accepts stool samples from them if they pass multiple blood, stool and general health tests.

How is it administered?
FMT at Frederick Memorial Hospital can be delivered three ways, by oral capsules, via and naso-gastric tube or directly to the colon through a colonoscopy.

Other Resources

While FMT is still not being used as an initial treatment for every *C. diff* infection, it has shown promise and might be appropriate if you have had recurrent episodes of *C. diff* Talk with Dr. Pierce or Dr. Afrookteh to see if FMT might be appropriate for you.

You can also read up on *C. diff* and this new therapy on your own:

Mayo Clinic

Johns Hopkins

OpenBiome