



Treating *C. Difficile* with Faecal Microbiota



Faecal microbiota transplantation (FMT) using frozen stool is just as effective as transplantation using fresh stool in resolving diarrhoea among adult patients with recurrent or refractory *Clostridium difficile* infection (CDI). The findings are published in *JAMA*.

CDI has become a major health concern because of limited treatment options and associated clinical and infection control issues. Increases in failure rates with conventional treatment, and recurrences following initial cure, present significant challenges to healthcare systems: more than 60 percent of patients experience further episodes after a first recurrence.

Restoration of protective colonic microbiota by FMT — ie, reconstitution of normal flora (gut bacteria) by a stool transplant from a healthy individual — has shown evidence as an effective treatment for recurrent CDI. However, the usefulness of this approach may be limited by logistical difficulties in preparing fresh material. By contrast, the use of frozen-and-thawed (frozen) FMT offers a number of advantages: less cost with reduction in number and frequency of donor screenings; immediate availability of FMT; and the possibility of delivering FMT at centres with no laboratory facilities.

The new study aimed to assess the efficacy and safety of both frozen and fresh FMT for management of recurrent CDI. Christine H. Lee, MD, McMaster University, Hamilton, Ontario, Canada, and colleagues randomly assigned 232 adults with recurrent or refractory CDI to receive frozen (n = 114) or fresh (n = 118) FMT via enema.

A total of 219 patients (n = 108 in the frozen FMT group and n = 111 in the fresh FMT group) were included in the modified intention-to-treat (mITT) population and 178 (frozen FMT, n = 91; fresh FMT, n = 87) in the per-protocol population. In this group, the proportion of patients with clinical resolution of diarrhoea without relapse at 13 weeks was 83.5 percent (frozen FMT) and 85 percent (fresh FMT). In the mITT population the clinical resolution was 75 percent (frozen FMT) and 70 percent (fresh FMT). There were no differences in the proportion of adverse or serious adverse events between the treatment groups.

“In this clinical trial, the use of frozen FMT compared with fresh FMT for the treatment of recurrent or refractory CDI was noninferior [not worse than] in terms of efficacy; findings for frozen FMT and fresh FMT were similar in terms of safety,” the authors note. “Given the potential advantages of providing frozen FMT, its use is a reasonable option in this setting.”

In an accompanying editorial, Preeti N. Malani, MD, MSJ, and Krishna Rao, MD, MS, of the University of Michigan Health System, Ann Arbor, say Dr. Lee's findings offer the best evidence to date supporting the use of

frozen FMT in resolving diarrhoea among patients with recurrent CDI.

They note how the ability to use frozen stool eliminates many of the logistical burdens inherent to FMT, as well as reducing procedure costs since comprehensive donor screening is expensive. They add: "This study also provides greater support for the practice of using centralised stool banks, which could further remove barriers to FMT by making available to clinicians safe, screened stool that can be shipped and stored frozen and thawed for use as needed."

Source: [JAMA](#)

Image credit: MRSA Survivors Network

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