

Patient information on Fecal Microbiota Transplantation (FMT)

Introduction:

Fecal microbiota transplantation (FMT, also known as intestinal microbiota transplantation [IMT]) consists of the infusion of feces from a healthy donor to the gastrointestinal tract of a recipient patient, in order to treat a specific disease associated with the alteration of gut microbiota, such as *Clostridium difficile* infection. It is a method to restore the balance of the gut microbiota and is used when standard therapies fail to treat the disease. The methodology is to collect feces from a healthy donor and then filter and dilute the collected sample with sterile saline. The processed solution may be used in two forms: frozen and fresh. The solution is then infused into patients through different methods such as nasoduodenal tube, Oesophagogastroduodenoscopy (OGD), sigmoidoscopy or colonoscopy.

Healthy donors:

FMT solution will be provided by the Hong Kong FMT Stool Bank, The Chinese University of Hong Kong. Donors recruited to the Stool Biobank are carefully selected and screened. Laboratory tests are performed to ensure donors' eligibility to donate stool. Donor will undergo blood tests to screen for Hepatitis B, Hepatitis C, HIV and Syphilis, and also stool tests to screen for bacterial infection, parasite, virus and *C. difficile* infection. Donors are volunteers from general population including spouses or partners, first-degree relatives, other relatives, friends and others who are known or unknown to you. You may receive stools from multiple donors whose identity may not be made available to you.

Why should I have FMT?

Dysbiosis, or alterations of the gut microbiota ecology, have been implicated in a number of disease states, such as *Clostridium difficile* infection (CDI). Currently, the first-line treatment for *C. difficile*-associated diarrhea includes cessation of the antibiotic implicated in the development of CDI, followed by treatment with metronidazole or vancomycin. However, disease recurrence is an increasing problem, some CDI patients experience at least one recurrence after completion of antibiotic treatment. Moreover, there is an increasing number of patients who require life-saving emergency colectomy, experience persistent CDI after surgery.

Fecal microbiota transplantation (FMT) has attracted great interest in recent years and is now recommended as the most effective therapy for refractory or recurrent CDI not responding to standard therapies. Doctor may suggest FMT to patients who have recurrent or refractory CDI after completion of standard therapy.

Patients who received standard therapy for other diseases associated with the alteration of gut microbiota but failed to treat the diseases, may also be recommended to have FMT.

Possible risks or complications of the procedure:

Major complication of endoscopy (OGD, sigmoidoscopy and colonoscopy) including perforation may occur, but the complication rate is overall less than 1%. Please refer to the patient information of OGD or colonoscopy for details.

There is a potential risk of infectious disease during fecal microbiota transplantation. However, the screening for healthy donor is even robust compared with blood donation. The theoretical risk of enteric bacterial or viral infection is low after donor screening. Most of the enteric and viral infection are mild and self-limiting, and only require conservative treatment. Blood-borne infection has been screened out so the risk is very minimal. To date, FMT appears to be safe.

Preparation for FMT:

You may need to be fasted before the procedure depending on the method used for FMT. Please refer to the patient information of OGD or colonoscopy for details.

You should let the doctor know what medications you are taking and discuss whether you should stop any medications before procedure. You may be asked to stop any antibiotics for at least 24 hours before procedure. Otherwise, you should be able to take all of your medications as normal. Detail instruction will be given to you by your doctor.

Care after the procedure:

Depending on the method for FMT, local anaesthetics or intravenous sedation would be given to the patients to reduce patients' anxiety and discomfort. The effect for local anaesthetics will persist for an hour while the effect of intravenous sedation will be as long as one day. Patient should remain fasted until anaesthesia has worn off. This prevents choking with food or fluid intake. If intravenous sedation is used, patients should avoid operating heavy machinery or driving for the rest of the day. Please refer to the patient information of OGD or colonoscopy for details.

Patients are advised to enquire the date of follow up and follow the instruction given by the medical staff in completing other drug treatment.

Unexpected emergencies after the procedure:

Patients can call the "Endoscopy Center" within office hours for any discomfort occurred after the procedure, or queries on the medication. However, if there are any serious events such as gastrointestinal bleeding, severe abdominal pain etc, patients should attend local Accident and Emergency Department for immediate treatment.

For any queries, please consult your healthcare professional