

Fecal transplantation

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Faecal transplantation (*faecal microbial transplantation, stool transplantation, faecal bacteriotherapy, FMT - fecal microbiota transplantation*) is the transfer of faeces in native or processed form from donor to recipient. It is performed to treat the recipient, high efficacy is demonstrated especially in the therapy of antibiotic-resistant recurrent enterocolitis caused by *Clostridium difficile*, where the efficacy of over 90%, ie approximately three times that of vancomycin or fidaxomicin. There have been attempts to treat autoimmune diseases, especially intestinal inflammation, but the results are rather ambiguous. In 2013, in the Czech republic the method was rarely used due to the frequent rejection of patients.

Execution

The exact method of transfer is not standardized, it differs between workplaces, in principle, the following steps are present:

- The selection of a donor, most often a relative or a person from a common household. It is possible to use any other donor (for example, a healthcare professional)
- Examination of the donor for communicable diseases (HIV , viral hepatitis , stool parasites, etc.).
- Collection of about 40-200 g of faeces, homogenization in saline (typically by mixing), centrifugation or filtration to obtain a supernatant or filtrate of approximately twice the volume of the faeces.
- Application to the recipient by nasojejunal tube, enema or most effectively endoscopically into the appendix .

Fundamentally different transfer options have also been described, for example the filling of stool concentrate after centrifugation into acid-resistant capsules and their administration to the recipient.

Byly popsány i principiálně odlišné možnosti přenosu, například plnění koncentráту stolice po odstředění do acidorezistentních kapslí a jejich podávání příjemci.

Examination of donors

In the Czech Republic, due to the small number of transplants performed (2013), there are no uniform recommendations for the examination of donors.

In the United States of America, the following consensus recommendations were issued on 15 July 2013 by several professional societies (IDSA, ASGE, NASPGHAN, AGA, ACG) for the selection of stool donors for the treatment of Clostridial enterocolitis:

- In the case of an adult patient, the donor should ideally be a person living intimately with him / her in the same household; in the case of pediatric patients, an adult first-degree relative, a close family friend or a well-examined universal donor.
- For the purposes of the possibility of informed consent, donors should be older than eighteen years of age, however, even younger ones may possibly play the role of donors if they and both parents agree.
- Anamnestic questionnaires for donors should be similar to those for blood donors.
- Criteria excluding donations should include, but are not limited to:
 - Anamnesis of antibiotic treatment in the three months preceding the stool collection.
 - History of endogenous diseases of the gastrointestinal tract, including intestinal inflammation, irritable bowel syndrome, gastrointestinal malignancies or major gastrointestinal surgery.
 - Anamnesis of autoimmune or atopic diseases, also ongoing immunomodulatory treatment.
 - History of prolonged pain syndromes (fibromyalgia, fatigue syndrome) or neurological or developmental disorders.
 - Metabolic syndrome, more pronounced obesity (BMI > 30 kg / m²) or malnutrition.
 - Anamnesis of oncological diseases or ongoing oncological treatment.
- The following serological tests are recommended during the four weeks before transplantation:
 - HAV-IgM, HBsAg, antibodies anti-HCV, HIV-EIA.
 - RRR (rapid reagin reaction, inexpensive screening test on admission).
- In addition, the recommendations prescribe the following stool examinations (also during the four weeks before transplantation):
 - *Clostridia difficile* B-toxin (preferably by PCR).
 - Examination for intestinal pathogens.
 - With a positive travel history, examination for eggs and parasites in the stool.

References

Related articles

- Clostridium difficile
- Pseudomembranous enterocolitis

Source

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