

255. TRANSPLANT OF FAECAL MICROBIOTA - PRIORITY AREA IN THE AGENDA TO ERADICATE CLOSTRIDIUM DIFFICILE INFECTION

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Introduction: Fecal transplant or transplant of fecal microbiota (TFM) is an innovative technique of transplantation of fecal bacteria from a healthy person to a sick one. For the first time it was used by experts from the University Hospital "Hadassah"(Ierusalim) to treat certain intestinal diseases, especially the ones caused by the bacterium *Clostridium difficile*. This microorganism is found in intestines of people of different ages, but the increasing number of these bacteria inhibits the normal micro-flora of the intestinal tract inside healthy people. When the optimum balance in the gut is disrupted (often as a result of antibiotic treatment), there is a rapid increase of *Clostridium difficile*, which leads to diseases. *C. difficile* is estimated to be responsible for at least one fourth of antibiotic-Associated diarrheas in hospitalized patients. Studies that have been done in this field have contributed to the progress in getting known the TFM. The recovery of patients were successful in more than 90% after the manipulations which were performed, these being recognized as the most important scientific achievements of 2012.

Material and methods: The presentation represents an extensive literature review based on previously completed research; we have conducted its own study and concluded the benefit of this procedure for the treatment of patients with intestinal diseases.

The result of discussion: There are three antimicrobial drugs most commonly implicated in infection with *C. difficile*, clindamycin, ampicillin and the cephalosporin. First-line antimicrobial drugs for *C. difficile* treatment are metronidazole and vancomycin; however, recent data suggest that metronidazole is losing its efficacy and expert suggests to use more radical methods for treatment such as transplant of fecal microbiota. Transplantation can be provided through a variety of methodologies, either to the lower proximal, lower distal, or upper gastrointestinal tract. A research conducted in 2008 by T. Brodie, an Australian gastroenterologist, and other scientists, allowed to extend the list of indications for TFM. In addition to the treatment of intestine pathologies, faecal transplant was used to treat diseases like Parkinson's disease, diabetes mellitus, and insulin resistance, rheumatoid arthritis, obesity, and multiple sclerosis.

Conclusion: Unfortunately *C. difficile* infection increases incidence, severity and recurrence rates, particularly in the last several years. From 1996 to 2010, the reported incidence of CDI cases in acute care hospitals in the U.S indicates an increase from 139,000 to 349,000. Up to now the intestinal microbiota has been generally inaccessible to scientific researches because most of them were hardly cultivated in the laboratory. The transplant of fecal microbiota proves to be an inexpensive and very effective intervention in intestinal diseases treatment. According to literature data, about 90% of patients are cured, so this procedure represented a real success in modern medicine.

Key-words: Fecal microbiota, *Clostridium difficile*, recurrent infection, intestinal disease.