

- Title** Fecal Transplantation for the Treatment of Clostridium difficile-associated Disease or Ulcerative Colitis
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Aim

This report aimed to assess the safety and efficacy/effectiveness of fecal transplantation compared with standard care in the prevention and treatment of patients with Clostridium difficile-associated disease (CDAD) or ulcerative colitis, and to provide a brief overview of the cost-effectiveness of this treatment. A social and system demographic analysis was also conducted.

Conclusions and results

Safety and efficacy/effectiveness:

No studies were identified that examined the efficacy/effectiveness of fecal transplantation in the prevention of CDAD or ulcerative colitis. In addition, no systematic reviews or comparative studies were found that examined the safety or efficacy/effectiveness of fecal transplantation for the treatment of CDAD or ulcerative colitis, or that compared different methods of delivering fecal suspension.

Ten case series studies were included: eight on CDAD, one on ulcerative colitis, and one on ulcerative colitis complicated by CDAD. Of these studies, three were complete articles and seven were abstracts. Most of the studies reported single-centre experiences of fecal transplantation performed by a single clinician. The number of patients ranged from 6 to 45, but was less than 20 in most studies. The length of follow-up was generally less than 1 year.

All eight case series studies reported positive results in patients with CDAD, and symptoms (most frequently diarrhea) usually improved immediately after fecal transplantation. However, the improvement or resolution of diarrhea did not always correspond with a negative test for *C. difficile* toxins.

Evidence from one study of six patients with ulcerative colitis demonstrated a promising result for fecal transplantation, based on clinical, colonoscopic, and histological examinations. Findings from several studies suggested that a sufficient amount of fecal suspension may be essential for achieving optimal outcomes. In the majority of studies, vancomycin or metronidazole was used for up to 2 weeks prior to fecal transplantation, but the possible influence of this

pre-treatment on patient outcomes could not be determined.

Adverse events were reported in five studies and included sore throat, headache, and some gastrointestinal problems. One study reported the death of a patient from peritonitis, which could have been related to the fecal suspension being administered via a nasogastric tube.

Cost-effectiveness:

No studies were identified that examined the cost-effectiveness of fecal transplantation in the treatment of CDAD or ulcerative colitis. Based on information provided by local clinical experts, the total cost for fecal transplantation administered by rectal retention enema was estimated to range from C\$500 to C\$1500. No information was available on the cost of fecal suspension delivered by other means.

Recommendations

Evidence from 10 case series studies indicated that fecal transplantation may be a promising and relatively safe treatment for patients with recurrent CDAD, ulcerative colitis, or ulcerative colitis complicated by CDAD. In most cases, symptoms improved immediately after treatment.

Methods

Please refer to the full report for details of the methods.

Further research/reviews required

Comparative studies are needed to delineate the role of fecal transplantation in patients with ulcerative colitis, to determine which method of delivering fecal suspensions is the most effective, and to ascertain whether patient outcomes are dose-related.

Written by

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