



TITLE: Fecal Bacteriotherapy for Patients with Recurrent *C. Difficile*: Clinical Effectiveness and Guidelines

DATE: 25 March 2013

RESEARCH QUESTIONS

1. What is the clinical effectiveness of fecal bacteriotherapy for patients with recurrent *C. difficile* infection?
2. What are the evidence-based guidelines regarding the use of fecal bacteriotherapy for patients with *C. difficile* infection?

KEY MESSAGE

Three systematic reviews, one randomized controlled trial, and six non-randomized studies were identified regarding the clinical effectiveness of fecal bacteriotherapy for patients with recurrent *C. difficile* infection. No evidence-based guidelines were identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 2), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and March 7, 2013. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Three systematic reviews, one randomized controlled trial, and six non-randomized studies were identified regarding the clinical effectiveness of fecal bacteriotherapy for patients with recurrent *C. difficile* infection. No relevant health technology assessments were identified. No evidence-based guidelines were identified regarding the use of fecal bacteriotherapy for patients with *C. difficile* infection. Additional references of potential interest are provided in the appendix.

This report is an update to “Fecal Bacteriotherapy for Patients with Recurrent Clostridium difficile: Clinical Effectiveness and Guidelines” completed in 2010 (http://www.cadth.ca/media/pdf/k0227_fecal_bacteriotherapy_htis-1-5.pdf).

OVERALL SUMMARY OF FINDINGS

Fecal transplantation (FT) was found to be a safe,^{1,2,5,7} effective^{1-5,7-10} and well tolerated⁹ procedure for patients with recurrent *C. difficile* infection (CDI) who had failed standard therapy. The treatment effectiveness of FT was also noted in difficult to treat patients¹⁰ and those with recurrent CDI caused by the virulent *C. difficile* 027 strain.⁸ The effectiveness of FT appears to vary by the volume of feces transplanted, the relationship of the recipient to the stool donor, and to the treatment of CDI prior to transplantation.³ Fecal transplantation completed via colonoscopic^{7,8} and duodenal infusions⁴ were effective treatment modes. The clinical practice of FT was simplified when there was a standardization of the donor material preparation which addressed both aesthetic concerns and donor screening costs.⁶

Adverse events following FT were either uncommon^{2,3} or not observed.⁹ Identified adverse events included irritable bowel syndrome, symptoms of mild enteritis, and suspected peritonitis.² In addition, FT treatment failure was noted when administered after only a short duration of CDI symptoms (<60 days).²

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Guo B, Harstall C, Louie T, Veldhuyzen van Zanten S, Dieleman LA. Systematic review: faecal transplantation for the treatment of Clostridium difficile-associated disease. *Aliment Pharmacol Ther.* 2012 Apr;35(8):865-75.
[PubMed: PM22360412](#)
2. Sofi AA, Silverman AL, Khuder S, Garborg K, Westerink JM, Nawras A. Relationship of symptom duration and fecal bacteriotherapy in Clostridium difficile infection-pooled data analysis and a systematic review. *Scand J Gastroenterol.* 2012 Nov 19.
[PubMed: PM23163886](#)
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Randomized Controlled Trials

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Non-Randomized Studies

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[PubMed: PM20662620](#)

10. Rohlke F, Surawicz CM, Stollman N. Fecal flora reconstitution for recurrent *Clostridium difficile* infection: results and methodology. *J Clin Gastroenterol*. 2010 Sep;44(8):567-70.

[PubMed: PM20485184](#)

Guidelines and Recommendations

No literature identified.

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APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies – Patients Attitudes Towards Transplantation

11. Zipursky JS, Sidorsky TI, Freedman CA, Sidorsky MN, Kirkland KB. Patient attitudes toward the use of fecal microbiota transplantation in the treatment of recurrent *Clostridium difficile* infection. *Clin Infect Dis*. 2012 Dec;55(12):1652-8.
[PubMed: PM22990849](#)

Case Series

12. Zainah H, Silverman A. Fecal Bacteriotherapy: A case Report in an immunosuppressed patient with ulcerative colitis and recurrent *Clostridium difficile* Infection. *Case Rep Infect Dis*. 2012;2012:810943.
[PubMed: PM22593832](#)
13. Silverman MS, Davis I, Pillai DR. Success of self-administered home fecal transplantation for chronic *Clostridium difficile* infection. *Clin Gastroenterol Hepatol*. 2010 May;8(5):471-3.
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Review Articles

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Additional References

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[PubMed: PM21568363](#)
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