Physician Attitudes Toward the Use of Fecal Transplantation for Recurrent Clostridium difficile Infection in a Metropolitan Area

In the United States and Canada there has been an alarming increase in the incidence and severity of Clostridium difficile infection (CDI) in the last decade [1]. It is now estimated that between 500,000 and 700,000 cases of CDI occur in US hospitals annually, with an estimated hospital excess cost of care of approximately $3.2 billion [2, 3]. With the increase in risk of developing CDI, high rates of disease recurrence are being seen without the availability of adequate treatment [4, 5].

It is now accepted that disruption of the normal balance of colonic microbiota secondary to antibiotic use facilitates the development of CDI and that improvements in the quality and quantity of flora are associated with recovery of infection and disease recurrence. Studies have shown that patients with recurrent CDI have decreased anaerobic Bacteroidetes and Firmicutes in their stool compared to patients recovering from single episodes of CDI [6]. Numerous case reports and retrospective case series have demonstrated benefit of fecal transplantation (FT) in patients with severe or recurrent CDI with cure rates of >90% [7–12]. Fecal transplantation involves administration of a suspension of feces obtained from a healthy individual into the colon of a patient with recurrent CDI to promote normalization of flora and inhibition of the infecting C. difficile [8]. Probiotics have been used widely for patients with CDI in efforts to repair the disruption of microbiota, leading to prevention and control of CDI [13]; however, the available probiotics have been shown to have a limited effect, failing to reach the efficacy of fecal transplantation from a healthy volunteer.

Despite growing evidence supporting safety [14] and efficacy [7–12] of FT in CDI, this form of treatment is not widely available. The aim of the study was to determine physician attitudes toward the use of FT in the Houston metropolitan area to see if there was sufficient local interest to support development of a treatment center.

Using a questionnaire mailed to gastroenterologists citywide and infectious disease specialists listed in a roster maintained by the Harris County Medical Association, we attempted to assess physicians’ willingness to provide patients with recurrent or refractory CDI to a local center for FT therapy. Two hundred sixty-four surveys were sent to 187 gastroenterologists and to 77 infectious disease specialists in Harris County (Houston), Texas. The overall rate of response for the survey was 34% (89 completed and returned). Fifty-five (29%) of the gastroenterologists and 32 (42%) of the infectious disease specialists completed the survey (Table 1). A majority of the responding physicians from the 2 medical groups were supportive of the creation of a local FT center (35/55 [64%] for gastroenterologists and 22/32 [69%] for infectious disease specialists; P = .628). A high percentage of responding gastroenterologists (49/55 [89%]) and infectious disease specialists (26/32 [81%]) indicated that they would refer patients to a newly developed local FT center.

We are encouraged to pursue the development of an FT center in Houston and would like to encourage other academic units outside our city to develop FT programs to improve therapy of local patients and to engage in studies of pathophysiology of successful CDI management. Improvements in FT efficiency are likely to be seen by using frozen fecal aliquots or lyophilized fecal samples from a single donor for multiple patients. Mechanisms of FT effects should follow

| Table 1. Responses From Gastroenterologists and Infectious Disease Specialists Regarding Need for Fecal Transplantation Center |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Specialist            | Need Fecal Transplantation Centerwide | Refer Patients to Fecal Transplantation Center Citywide |
| Gastroenterologist (n = 55) | Yes (35 [64])       | No (4 [7])                    | Neutral (16 [29])  | Yes (49 [89])     | No (6 [11]) |
| Infectious disease specialist (n = 32) | Yes (22 [69])       | No (5 [16])                    | Neutral (5 [16])   | Yes (26 [81])     | No (6 [19]) |

Data are presented as No. (%).
Correspondence: Zhi-Dong Jiang, MD, PhD, 1200 Herman Pressler, Rm 741, Houston, TX 77030 (zhi-dong.jiang@uth.tmc.edu).

Clinical Infectious Diseases 2013;56(7):1059–60
© The Author 2012. Published by Oxford University Press on behalf of the Infectious Diseases Society of America. All rights reserved. For Permissions, please e-mail: journals.permissions@oup.com.

DOI: 10.1093/cid/cis1025

studies to characterize the colonic microbiome in patients with CDI and CDI recurrence by metagenomic methods. We all should be working toward a more acceptable and replicable form of nonfcal therapy of refractory cases of CDI using selective flora, cocktails of probiotics, or manufactured bacterial flora metabolic products.

Note

Potential conflicts of interest. All authors: No reported conflicts.

All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Zhi-Dong Jiang,1 Ly N. Hoang,2 Todd M. Lasco,3 Kevin W. Garey,4,5 and Herbert L. DuPont1,5
1Center for Infectious Diseases, University of Texas School of Public Health, 2University of Texas Medical School, 3Internal Medicine, St Luke’s Episcopal Hospital, 4College of Pharmacy, University of Houston, and 5Internal Medicine, Baylor College of Medicine, Houston, Texas

References


© The Author 2012. Published by Oxford University Press on behalf of the Infectious Diseases Society of America. All rights reserved. For Permissions, please e-mail: journals.permissions@oup.com.

DOI: 10.1093/cid/cis1025