Background

Clostridium difficile Infections in the Elderly

- Clostridium difficile colitis results from a disturbance of the normal bacterial flora of the colon, colonization by C. difficile, and the release of toxins that cause mucosal inflammation and damage.
- In the elderly, the primary cause of C. difficile infection is exposure to antibiotics, typically occurs after the use of broad-spectrum antibiotics.
- It is estimated 70%–80% of CDIs occur in adults 65 years of age and older.
- Advanced age is an important risk factor for recurrent CDI.
- It is estimated that 2 out of 3 healthcare-associated CDI infections occur in patients age 80 years or older.
- Of the estimated 25,000 deaths within 30 days of CDI diagnosis in 2015, approximately 40% were in those 65 years of age and older.
- One out of every nine elderly patients with healthcare-associated CDI dies within 30 days of diagnosis.

Fecal Microbiota Transplant (FMT)

- The transplantation of fecal bacteria from a healthy individual into a recipient in order to replenish the normal flora of the colon.
- Clinical trials have demonstrated FMT to be over 90% effective as a last-line treatment for recurrent CDI.
- Of the estimated 29,000 deaths within 30 days of CDI diagnosis in 2015, approximately 40% were in those 65 years of age and older.
- Patients with severe-complicated CDI, severe sepsis or septic shock, and those without an alternative treatment option may benefit from FMT.
- The majority of patients evaluated received cFMT therapy via lower delivery.

Objective

The objective of the study is to evaluate the clinical impact of FMT in the older adult population (65 years of age and older).

Methods

- Institutional Review Board exempt retrospective observational study.
- Patients 65 years of age with refractory or recurrent CDI who received cFMT via colonoscopy or capsule were included.
- Patients with severe-complicated CDI, severe sepsis or septic shock, and those without an alternative treatment option may benefit from FMT.
- The majority of patients evaluated received cFMT therapy via lower delivery.
- There did not appear to be an association between FMT donor and sustained clinical cure.
- No serious adverse events were reported in the study population.

Results

- Total of 36 patients met inclusion criteria.
  - 23 colonoscopy FMT
  - 13 oral capsule FMT
- One patient received FMT via colonoscopy twice – both were therapeutic failures.
- Average age was 77 years (65 – 90).
- Median recurrent episode was 3.
- Median CDI severity score was 2.
- Total success rate was 69.4% (25/36).
- 63.9% (21/33) via colonoscopy.
- 64.3% (9/14) via oral capsule.
- 51.4% (25/49) overall.

Clinical Outcome by Severity

- Sustained clinical response and the absence of C. difficile associated diarrhea.
- Clinical Cure by Route
  - Colonoscopy FMT: 12 (55.6) / 22 (100%)
  - Capsule FMT: 8 (44.4) / 18 (100%)
- Clinical Cure by Route
  - Colonoscopy FMT: 14 (63.2) / 22 (100%)
  - Capsule FMT: 5 (23.8) / 23 (100%)

Clinical Outcome by Recurrence

- The majority of patients included in the cFMT therapy via colonoscopy.
- CDI rate, CDI readmission rate, rate of CDI-associated death, cost of CDI admissions, and rate of use of each antimicrobial regimen.

Conclusions

- cFMT was found to have a success rate of 69.4% in the elderly population that have previously failed multiple courses of antimicrobial therapy.
- FMT via colonoscopy provided a slightly lower success rate, than FMT via oral capsule.
- FMT may be considered a safe and potentially useful therapy for the treatment of refractory or recurrent CDI in patients 65 years of age or older.
- FMT proved to be a viable alternative to the burdensome process of traditional FMT.
- Further studies are needed to confirm the presented findings.

References


The authors have nothing to disclose.