Poster #797

Management of Patients with Multiple *Clostridioides difficile* Infection Recurrences using a Tapered-Pulsed Fidaxomicin Strategy

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Background

There is a paucity of data assessing outcomes of alternate fidaxomicin strategies in patients with recurrent *Clostridioides difficile* infection (rCDI)[1-4]

Objective

Describe the characteristics and outcomes of patients who received a tapered-pulsed fidaxomicin (T-P FDX) regimen following a CDI treatment course in patients with rCDI

Methods

- Retrospective case series of consecutive patients who received T-P FDX between January 1, 2014-June 30, 2019 in a specialty CDI clinic
- The first episode in which T-P FDX was administered was analyzed
- Failure was defined as the persistence of diarrhea and/or the need for additional CDI treatment at any time on T-P FDX
- Sustained clinical cure (SCC) was defined as resolution of diarrhea without recurrence
- Recurrence was defined as the return of diarrhea requiring retreatment with CDI therapy after completion of T-P FDX
- Both SCC and recurrence were evaluated at 30 and 90 d after completion of T-P FDX

Results

- 46 patients who received T-P FDX were evaluated
- The most common T-P FDX regimen was 200 mg once daily for 7 d, then 200 mg every other day for 26 d, after a CDI treatment course
- 34 (78%) and 28 (64%) patients achieved SCC at 30 and 90 d, respectively
- 10 (23%) and 16 (36%) patients developed rCDI at 30 and 90 d, respectively
- 2 (4%) patients failed to respond to T-P FDX
- 13 of 16 (81%) patients who had rCDI had confirmation with a positive stool CD test by NAAT
- Of the 10 patients who developed recurrence at 30 d:
  - 1 patient received subsequent systemic antibiotics
- Of the 6 patients who developed recurrence between 39 and 90 d:
  - 2 patients received subsequent systemic antibiotics, 1 patient received laxatives

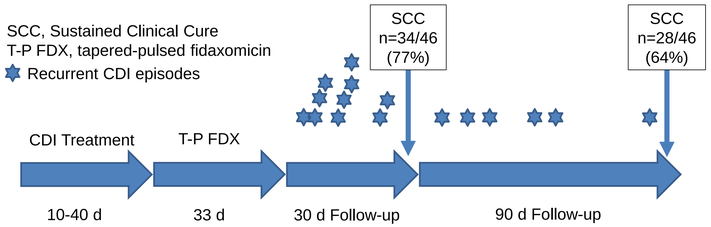
Results

Table 1. Characteristics and outcomes of patients who received a tapered-pulsed fidaxomicin regimen

	All patients (n=46)	Failed T-P FDX (n=2)	Completed T-P FDX (n=44)	Recurrence at 30 d (n=10)	SCC at 30 d (n=34)	Recurrence at 90 d (n=16)	SCC at 90 d (n=28)
No. (%)	46	2 (4.3)	44 (95.7)	10 (22.7)	34 (77.3)	16 (36.4)	28 (63.6)
Female, n (%)	33 (71.7)	2 (100)	31 (70.5)	5 (50)	26 (76.5)	10 (62.5)	21 (75)
Age (yr), mean ± SD	63.2 ± 19.9	55.5 ± 5	63.6 ± 20.3	65.7 ± 24	63 ± 19.5	65.1 ± 22.5	62.8 ± 19.3
Age ≥ 65 (yr), n (%)	25 (54.3)	0 (0)	25 (56.8)	6 (60)	16 (47.1)	9 (56.3)	16 (57.1)
Charlson comorbidity index score, mean ± SD	1.8 ± 1.9	1 ± 0	1.8 ± 1.9	1.7 ± 2	1.8 ± 1.9	1.6 ± 1.7	1.9 ± 2.1
No. previous CDI occurrences, mean ± SD	3.8 ± 3.1	13.5 ± 12	3.4 ± 1.5	3.3 ± 1.3	3.4 ± 1.6	3.6 ± 1.9	3.3 ± 1.3
No. previous CDI occurrences in the past 1 yr, mean ± SD*	3 ± 1.4	3 ± 2.8	3 ± 1.4	3 ± 1.5	2.9 ± 1.4	3.1 ± 1.5	2.9 ± 1.3
Immunosuppressants at baseline, n (%)	7 (15.2)	0 (0)	7 (15.9)	1 (10)	6 (17.6)	2 (12.5)	5 (17.9)
Acid suppressants at baseline, n (%)	17 (37)	0 (0)	17 (38.6)	4 (40)	13 (38.2)	5 (31.3)	12 (42.9)
No. previously failed vancomycin taper/pulse therapy, mean ± SD	34 (73.9)	1 (50)	33 (75)	7 (70)	26 (76.5)	10 (63)	23 (82.1)
Time to recurrence (d), median (min-max)	--	--	--	13 (3-27)	--	20 (3-87)	--
Additional antimicrobial exposure after T-P FDX regimen up to 90 d, n (%)	5 (10.9)	0 (0)	5 (11.4)	2 (20)	3 (8.8)	4 (25)	1 (3.6)
Duration of treatment prior to T-P fidaxomicin regimen (d), median (min-max)	20.5 (10-144)	63 (37-89)	19.5 (10-144)	28 (10-86)	17.5 (10-144)	23.5 (10-86)	17.5 (10-144)
No. received vancomycin: n (%)	29 (63)	1 (50)	28 (63.6)	6 (60)	22 (64.7)	10 (62.5)	18 (64.3)
No. received fidaxomicin: n (%)	22 (47.8)	1 (50)	21 (47.7)	4 (40)	17 (50)	7 (43.8)	14 (50)
No. received both vancomycin and fidaxomicin: n (%)	5 (10.9)	0 (0)	5 (11.4)	0 (0)	5 (14.7)	1 (6.3)	4 (14.3)
Duration of T-P FDX therapy (d), median (min-max)	33 (6-120)	10 (9-11)	33 (6-120)	33 (33-120)	33 (6-100)	33 (33-120)	33 (6-100)
Total duration of therapy for this episode (d), median (min-max)	60 (25-187)	73 (46-100)	60 (25-187)	61 (43-151)	53.5 (25-187)	61 (43-151)	52 (25-187)

T-P FDX, tapered-pulsed fidaxomicin; SCC, sustained clinical cure; d, days

Figure 1. Course of CDI therapy and follow-up



Discussion & Conclusion

- Among patients who had recurrent CDI, 25% (4/16) received a precipitating medication prior to the recurrence
- The SCC rate at 30 days in our study (77.3%) was higher than the rates reported in the EXTEND study for patients with 1 or 2 prior CDI episodes given extended-pulsed FDX (69.4% [25/36]) or vancomycin (46.2% [18/39])
- T-P FDX after CDI treatment with subsequent symptom resolution may increase microbiota recovery and suppress spore germination[4]
- T-P FDX regimen is an effective alternative dosing strategy in patients with multiply rCDI who are refractory to other treatments, including a vancomycin tapered and pulsed strategy

Disclosures

Dr. Tan, Dr. Skinner, Dr. Sirbu, Dr. Gerding, and Dr. Johnson has no relevant disclosures. Dr. Danziger is a speaker for Merck.

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