Poster P-1020

Real-World Effectiveness and Health-Related Quality of Life Improvements Using Fecal Microbiota, Live-jslm for the Prevention of Recurrent *Clostridioides difficile* Infection

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Key Findings

- **This real-world study demonstrates effectiveness and safety of fecal microbiota, live-jslm in preventing recurrence of CDI in routine clinical practice.**
- **Older age was associated with an increased risk of recurrence following RBL administration.**
- **Significant improvements in HR-QOL were observed, driven by the treatment success achieved with RBL.**

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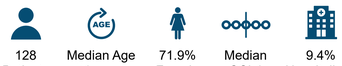
Background

- *Clostridioides difficile* infection has a high burden of disease with recurrence in 25% of those successfully treated. Up to 65% continue to experience recurrent episodes, leading to a decreased quality of life.[1-4]
- Fecal microbiota, live-jslm (RBL) is the first in-class microbiome-based therapy approved by the FDA in 2022 for the prevention of recurrence of *Clostridioides difficile* infection (rCDI) in adults.[5]
- This rectally-administered, single dose has been proven to be safe and efficacious in clinical trials.[5,6]
- The Bayesian analysis from the PUNCH CD3 clinical trial, showed that 70.6% of patients achieved treatment success at 8 weeks with RBL vs 57.5% with placebo.[7]
- The objective of this study is to report the effectiveness of RBL and assessment of health-related quality of life (HR-QOL) in patients with rCDI in an outpatient real-world setting.

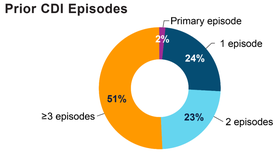
Methods

- A multicenter, single-arm cohort study was conducted of patients ≥18 years old who received RBL in Infectious Disease or Gastroenterology physician offices across the US between February 2023 and March 2025.
- Medical records were reviewed for data including patient demographics, comorbidities, number of prior CDI episodes, prior CDI treatment, rCDI risk factors, standard of care (SoC) antibiotics, and RBL-related adverse events.
- rCDI risk factors assessed included age ≥65 years, use of gastric acid suppressant therapy[a], non-CDI antibiotic use within 4 weeks prior to current CDI episode, and a compromised immune system[b].
- Other factors contributing to rCDI were assessed including chronic renal disease, CDI with severe presentation[c], and hospitalization within 4 weeks of current CDI episode.
- Patients were evaluated for recurrence of rCDI at 8 weeks post-RBL administration as per a standardized clinical protocol.
- Recurrence was defined as 3 or more liquid bowel movements within 24 hours that required CDI-related therapy. Treatment success was defined as absence of recurrence.
- HR-QOL was assessed at baseline and at 8 weeks post-RBL administration with the Cdiff32, a validated, disease-specific patient-reported instrument to evaluate changes in HR-QOL associated with CDI. It includes three domains (physical, mental, social) and a total score ranging from 0 (worst) to 100 (best).[8]
- Continuous data were reported as means with standard deviations or medians with interquartile ranges, and categorical data as counts and percentages. Two-tailed Fishers Exact test was used to evaluate differences in recurrence for rCDI risk factors and contributing factors.
- Changes in HR-QOL scores from baseline to 8 weeks were evaluated with paired t-test.
- P values <0.05 were considered statistically significant.

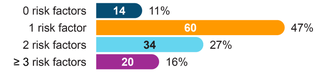
Study Cohort



Prior CDI Episodes

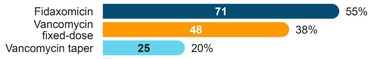


rCDI Risk Factors



- Diagnosis was by PCR testing in 47%, EIA testing in 15% and 2-step testing in 38%

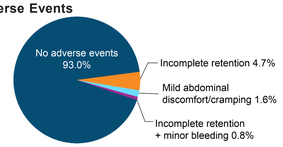
SoC Antibiotic for Current CDI Episode



- Median (IQR) days from SoC to RBL treatment = 2 (2-4)

Safety

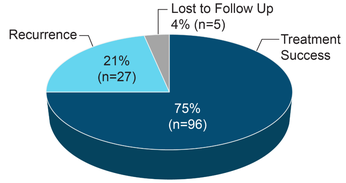
Adverse Events



- AEs occurred in 9 patients, of which 7 were incomplete retention.
- None with incomplete retention were re-treated and 6/7 (86%) had recurrence of CDI.

Effectiveness

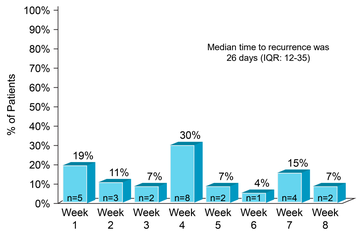
Treatment Response at 8 Weeks (N=128)



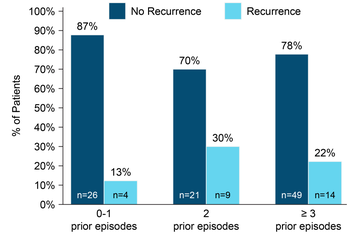
Evaluable Population (excludes lost to follow-up)

Treatment Success n/N	%	Recurrence n/N	%
96/123	**78%**	27/123	**22%**

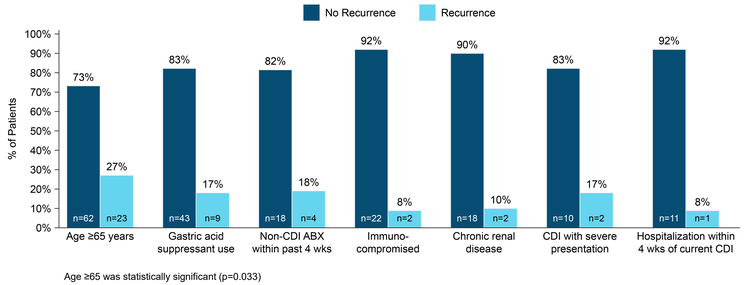
Recurrence over Time by Week (n=27)



Recurrence by CDI Episode (n=27)



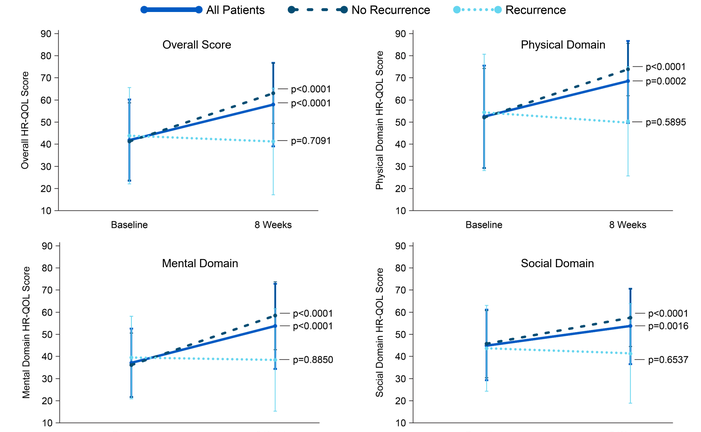
Recurrence at 8 Weeks by CDI Risk Factors and Contributing Factors



Age ≥65 was statistically significant (p=0.033)

HR-QOL

Change From Baseline to Week 8 in Cdiff32 Score Overall and by Recurrence (N=42)



Domain	All Patients (N=42)		p-value	No Recurrence (N=32)		p-value	Recurrence (N=10)		p-value
	Baseline mean ± SD	8-Week FU		Baseline mean ± SD	8-Week FU		Baseline mean ± SD	8-Week FU	
Overall	41.7 ± 18.3	57.7 ± 18.8	**<0.0001**	41.1 ± 17.4	62.8 ± 13.6	**<0.0001**	43.7 ± 21.7	41.1 ± 24.0	0.7091
Physical	52.1 ± 23.0	67.8 ± 18.3	**0.0002**	51.5 ± 22.3	73.3 ± 11.7	**<0.0001**	54.1 ± 26.1	50.1 ± 24.4	0.5895
Mental	30.3 ± 17.2	49.0 ± 21.5	**<0.0001**	29.4 ± 16.2	54.4 ± 17.1	**<0.0001**	33.1 ± 20.9	32.0 ± 25.9	0.8850
Social	45.4 ± 16.1	53.9 ± 17.1	**0.0016**	45.8 ± 15.2	57.8 ± 13.1	**<0.0001**	44.0 ± 19.6	41.5 ± 22.6	0.6537

DISCUSSION

This real-world study describes effectiveness of RBL for the prevention of rCDI at 8 weeks and assessment of HR-QOL at baseline and 8 weeks.

- **Effectiveness** of RBL was 75% and similar to clinical trials in an older population with high co-morbidities.[2,3]
- Among those who recurred, median time to recurrence was 26 days.
- Age ≥65 years was a risk factor associated with recurrence.
- **HR-QOL** was assessed at baseline and 8 weeks with the Cdiff32 in 42 patients.
- Significant improvement in HR-QOL scores were observed overall and in each major domain.
- HR-QOL scores increased significantly from baseline to 8 weeks in patients that did not have recurrence.
- These data are consistent with previously reported improvements in HR-QOL in patients receiving RBL.[9]

Abbreviations and Definitions

Abbreviations: ABX, antibiotic; CCI, Charlson Comorbidity Index; CDI, *Clostridioides difficile* infection; EIA, enzyme immunoassay and includes both toxin or GDH antigen testing; GDH, glutamate dehydrogenase; HR-QOL, health-related quality of life; IQR, interquartile range; PCR, polymerase chain reaction; RBL, fecal microbiota, live-jslm; rCDI, recurrent *Clostridioides difficile* infection; SD, standard deviation; SoC, standard of care

Definitions: [a]Proton pump inhibitor and/or histamine-2 receptor antagonist; [b]Due to immunosuppressive medication or underlying disease (immune deficiency, solid organ or hematopoietic stem cell transplant, absolute neutrophil cell count <500 cells/mL); [c]Defined by any of the following: albumin ≤3.0 g/dl, serum creatinine ≥1.5 times above baseline, hypotension or shock, intensive care unit stay related to CDI, ileus, serum lactate >5 mmol/L, toxic megacolon or colectomy related to CDI, white blood cell count ≥15,000 cells/mL

References

1. Cornely OA, et al. Clin Infect Dis. 2012; 55(suppl 2):S154-S161.
2. McFarland LV, et al. Am J Gastroenterol. 2002; 97: 1769-1775.
3. Hengel RL, et al. J Patient Rep Outcomes. 2022; 6:49.
4. Lurienne L, et al. J Patient Rep Outcomes. 2020; 4:14.
5. Rebyota (fecal microbiota, live - jslm) [package insert]. Roseville, MN: Ferring Pharmaceuticals; 2022.
6. Dubberke ER, et al. Infect Dis Ther. 2023; 12:703–710.
7. Khanna S, et al. Drugs. 2022; 82:1527–1538.
8. Garey KW, et al. J Clin Gastroenterol. 2016; 50:631-637.
9. Feuerstadt P, et al. Infect Dis Ther. 2024:13:221-236

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