Real-Word Experience of Bezlotoxumab for the Prevention of Recurrent *Clostridioides difficile* Infection: A systematic review and meta-analysis

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BACKGROUND

- Two large, placebo-controlled phase III trials, MODIFY I and MODIFY II, demonstrated that patients with *Clostridioides difficile* infection (CDI) treated with bezlotoxumab (BEZ) had a lower rate of recurrent infection than placebo.

OBJECTIVES

We aimed to carry out a systematic review and meta-analysis of the efficacy of BEZ in real-world clinical setting.

METHODS

- A search of literature was run on February 2022, in Cochrane Central Register of Controlled Trials, Embase, Medline, Scopus and Web of Science Core Collection.

METHODS

- The random-effects model described by DerSimonian and Laird was used to calculate weighted pooled resolution rates (WPR) with corresponding 95% confidence intervals (CI).
- We assessed heterogeneity within groups with the inconsistency index (I^2) statistic.
- The primary outcome of our pooled analysis was CDI clinical resolution rates with BEZ i.e. resolution of CDI with no recurrence in the follow up period.

RESULTS

- Thirteen studies (11 retrospective cohorts, 2 unspecified) including 1008 CDI patients were included.

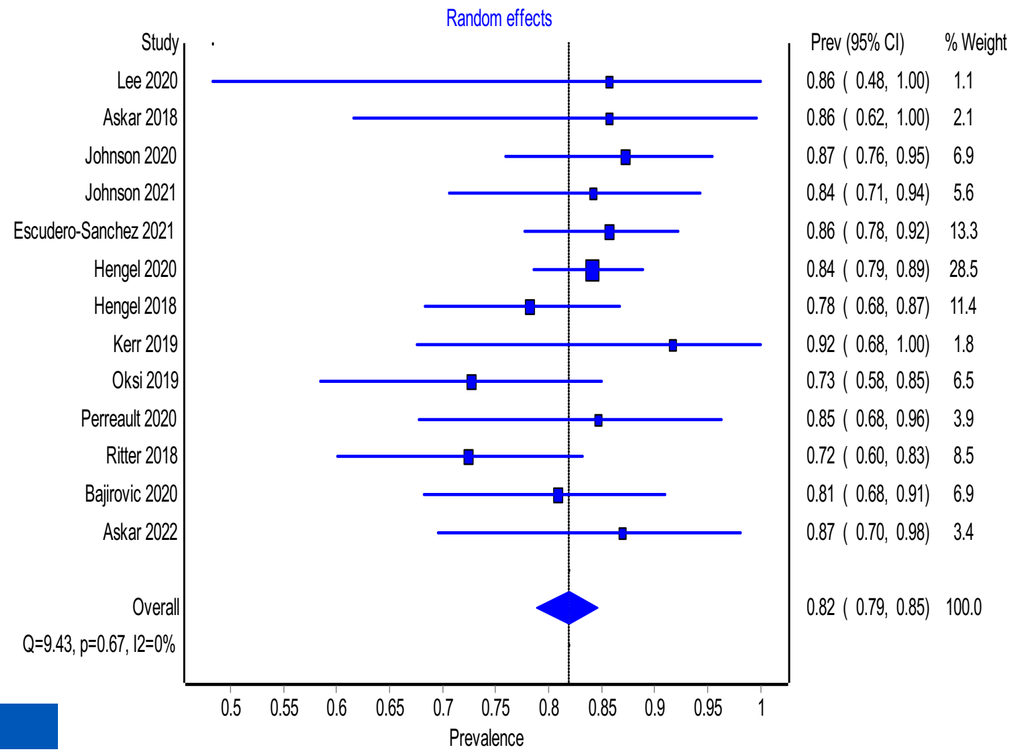

Figure 1: Forest plot depicting prevalence and heterogeneity amongst included studies

RESULTS

- A total of 771 patients received BEZ, 237 received SOC and 14 received FMT.
- Of the 771 on BEZ, 550 had CDI resolution with WPR of 82% (95% CI 79-85%).
- No significant heterogeneity was noted, with I^2=0% (Figure 1).
- A resolution rate of 50% (7/14) was seen in the FMT group. Subgroup analysis comparing BEZ with SOC revealed a WPR of 84% (95% CI 79-89%) with BEZ vs 67% (95% CI 61-73%) with SOC (p=0.0001).

CONCLUSION

Use of BEZ in real-world clinical settings seems to have a high resolution rate of CDI in patients with recurrence.

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