Real-World Experience of Administration of Bezlotoxumab in an Outpatient Infusion Center Upon Discharge in Recurrent *Clostridioides difficile* patients

Logan C. Bradley, Pharm.D.; Christopher M. Bland, Pharm.D., BCPS, FIDSA, FCCP; Bruce M. Jones, Pharm.D., FIDSA, BCPS
St. Joseph's/Candler Health System, Savannah, Georgia and The University of Georgia College of Pharmacy, Savannah, Georgia

Background

- Bezlotoxumab is a humanized monoclonal antibody administered as single IV infusion that binds to *Clostridioides difficile* toxin B
- It is currently recommended as a co-intervention in the focused update of the 2021 IDSA guidelines for patients with recurrent *C. difficile* infection (CDI) in the last 6 months in addition to standard of care (SOC) antibiotics (vancomycin or fidaxomicin) to decrease CDI recurrence
- Due to logistical issues of administration and cost, it is difficult to give as part of the inpatient stay
- This case series evaluated the novel practice of discharging patients to receive bezlotoxumab immediately after discharge at an infusion center that is part of our not-for-profit community health system

Purpose

Primary Objectives

- Evaluate the safety and efficacy of bezlotoxumab in the outpatient setting
- Rate of recurrent CDI at 12 weeks and 1 year after receiving infusion

- **Inclusion criteria**
  - Inpatients ≥ 18 years old who received bezlotoxumab as an outpatient infusion after discharge from June 2019 – January 2022
- **Exclusion criteria**
  - Receipt of bezlotoxumab as inpatient

Methodology

- Non-randomized, retrospective chart review
- CDI was defined as ≥ 3 loose stools within 24 hours and a positive stool test for toxigenic *C. difficile*, recurrence was defined using same parameters
- Age, sex, race, allergies, height, weight, Scr, WBC, albumin, and history of antibiotic and PPI use in the past 30 days were collected for each patient
- CDI treatment, specifics of bezlotoxumab infusion, adverse reactions, and recurrence (12 weeks and 1 year) were also recorded

Results

Patient #	Previous CDI (#)	Abbreviated PMH	ABX within 30 days of CDI	Primary therapy	PPI outpatient or inpatient	Day of therapy bezlotoxumab administered	Weight (kg)	Dose (in NS 250mL over 1 hr)
1	2	**CHF,** COPD, ESRD, FMT X2	Piperacillin/tazobactam 3.375g IV q12h	Vancomycin 125 mg PO q6h	N	4	55	550 mg
2	1	CKD, T2DM	Ceftriaxone 1g IV q24h	Vancomycin 125 mg PO q6h	Y	7	85	850 mg
3	6	FMT	Ceftriaxone 1g IV q24h, Ciprofloxacin 400 mg IV once, Fosfomycin 3 g PO once	Fidaxomicin 200 mg PO q12h	N	6	53	530 mg
4	1	T2DM	Cefepime 1 g IV q8h	Vancomycin 500 mg PO q6h followed by taper	Y	10	30	300 mg
5	1	Addison's, HTN, T2DM	Ceftriaxone 2g IM once, Ciprofloxacin 500 mg PO q12h	Vancomycin 125 mg PO q6h followed by taper	Y	14	70	700 mg
6	2	ESRD, HTN	None	Vancomycin 250 mg PO q6h followed by taper	Y	6	90	900 mg
7	1	CKD, HTN, T2DM	Cefdinir 300 mg PO q12h	Vancomycin 250 mg PO q6h followed by taper	Y	17	100	1000 mg
8	6	Addison's, Multiple Myeloma	Cefepime 1g IV q8h, Ceftazidime/avibactam 2.5g IV X2, Fosfomycin 3g PO once	Vancomycin 125 mg PO q6h	N	5	136	1360 mg
9	2	ESRD, T2DM	None	Vancomycin 125 mg PO q6h	N	9	84	840 mg
10	1	ESRD	Merropenem 500 mg IV q8h	Vancomycin 125 mg PO q6h changed to fidaxomicin 200 mg PO q12h	Y	20	66	660 mg

- All patients had ≥ 1 previous CDI in the past 6 months (range 1-6, with the average 2.4)
- 80% of patients were female, with an average age of 66.5 years
- Average length of stay was 11.7 days
- Average time to infusion was 9.8 days after starting SOC antibiotics and 80% of patients received treatment within 24 hours of discharge
- All patients reported no adverse reactions during infusion
- One patient with history of CHF was readmitted 69 days after receiving bezlotoxumab due to a CHF exacerbation

Recurrence

≤ 12 weeks
- 2/10 patients (20%)

≤ 1 year
- 4/10 patients (40%)

- Recurrence rates compared to phase III trials were similar at 12 weeks (16% vs. 20%)

Conclusions

- Discharging patients to receive bezlotoxumab as an outpatient infusion may be a safe and effective way to treat recurrent CDI
- Shifting costs to outpatient may offer a logistical & financial advantage

References

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