

Is Dalbavancin a Reliable Treatment Option in Socially Challenged Populations?

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BACKGROUND

- Dalbavancin (DAL) is a lipoglycopeptide antibacterial that was granted full FDA approval for treating acute bacterial skin and skin structure infections (ABSSSI) in 2014.
- Due to its long terminal half-life of 14.4 days, DAL has been used off-label to treat infections that require a prolonged duration of treatment, especially in patients with challenging social situations.

PURPOSE

- To evaluate the differences in outcomes and clinical effectiveness of DAL in patients with or without substance use disorder (SUD).
- To assess adverse reactions including gastrointestinal upset and elevated liver enzymes.

METHODS

- We performed a retrospective review of all the adult patients (>18 years old) who received DAL within our health care system between January 1st, 2016, and July 16th, 2021.
- Baseline characteristics were collected, including age, gender, race, history of SUD, diagnosis, and recommended DAL regimen.
- Follow-up data, including completion of treatment, outpatient visits to infectious diseases clinic (IDC), and recurrence of infection within six months, were also collected.
- Self-reporting adverse events data were also obtained.

RESULTS

Table 1. Baseline characteristics of the study population

Characteristic	n=50
Male sex, n (%)	31 (62)
Age (yr), median (range)	45.5 (23-74)
Race, n (%)	
White	41 (82)
Black	9 (18)
Ethnicity, n (%)	
Non-Hispanic	50 (100)
Substance use disorder, n (%)	31 (62)
Diagnosis, n (%)	
ABSSSI	3 (6)
Bacteremia	8 (16)
Bone or joint infections	29 (58)
Endocarditis	5 (10)
Epidural abscess	2 (4)
Liver abscess	1 (2)
Septic thrombophlebitis	1 (2)
Surgical site infection	1 (2)

Patients with a history of SUD are less likely to complete the recommended DAL regimen (64.5% vs. 100%; $p=0.003$), and less likely to follow in IDC (16.1% vs. 52.6%, $p=0.016$) when compared to patients without a history of SUD.

Table 2. Outcomes of patients with dalbavancin orders

Outcomes	All	No SUD	SUD	p-value
	50	19	31	
Recurrence within 6 mo, n(%)	12(24)	3(15.8)	9(29)	0.332
ID follow-up, n (%)	15(30)	10(52.6)	5(16.1)	0.016
Completed treatment, n (%)	39(78)	19(100)	20(64.5)	0.003
Recurrence within 6 mo for those completed tx, n(%)	8(20.5)	3(15.8)	5(25)	0.245

Table 3. Self-reported adverse reactions

Adverse reactions	N (%)
GI symptoms	2 (4)
Elevated LFTs	1 (2)
Migraines flare-up	1 (2)
Blurry vision	1 (2)

CONCLUSION

- Although DAL is a safe and convenient antimicrobial option, more efforts should be made to establish consistent treatment regimens for its off-label use.
- Those with social barriers such as substance use disorder might benefit from additional measures to ensure treatment completion and proper follow-up.