THERAPEUTIC DRUG MONITORING FOR DALBAVANCIN SUPPRESSIVE THERAPY : OPTIMIZING INFUSION SPACING BASED ON MINIMUM INHIBITORY CONCENTRATION

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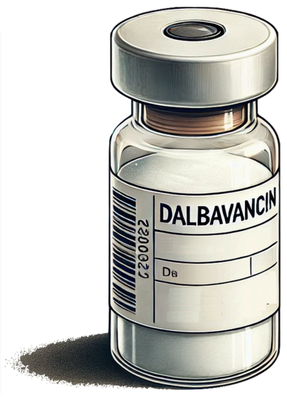
BACKGROUND AND IMPORTANCE

- **Dalbavancin** : Long-acting antibiotic used in **suppressive therapy**
- Current practice : TDM targeting >8 mg/L (MIC 0.125 mg/L)
- Issue : Fixed thresholds may lead to **unnecessarily frequent infusion**
- New perspective : Adjust target proportionally to MIC to optimize therapy
- Potential benefit : Extended dosing intervals, fewer infusions, improved adherence



AIM AND OBJECTIVE

Demonstrate the benefits of MIC-adapted concentration thresholds for TDM and infusion spacing in dalbavancin-treated patients.

MATERIALS AND METHODS

Inclusion Criteria : Patients receiving **dalbavancin** as suppressive therapy.

Dalbavancin Monitoring : Plasma concentration measured **before each administration**

Retrospective study conducted from November 2017 to January 2024.

- Therapeutic Targets :
  - **Primary target : 8 mg/L** (adjusted for MIC <0.125 mg/L).
  - **Proportional adjustments** made for MIC changes (e.g., halving MIC reduced target by 50%).

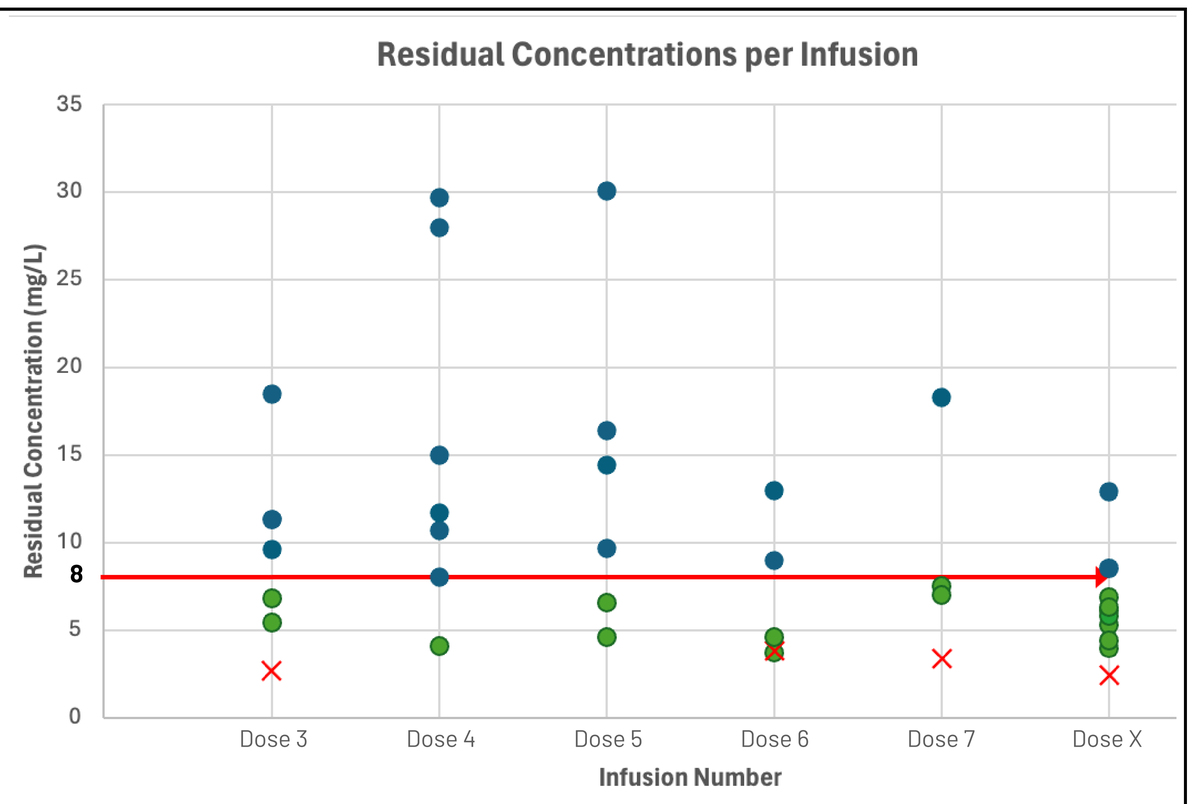
RESULTS

n = 7 patients ; **Median age :** 72 years [63.5 – 79.5]

Bacterial distribution and MIC values (mg/L) : S. aureus (n=2; 0.032, 0.004), E. faecalis (n=2; 0.032, 0.047), S. mitis (n=1; 0.125), S. epidermidis (n=1; 0.125), C. acnes (n=1; 0.06).

● = Residual C (mg/L) > 8mg/L
● = Residual C (mg/L) < 8mg/L and > MIC-adjusted target
✕ = Residual C (mg/L) < 8mg/L and < MIC-adjusted target

Median MIC : 0.047 mg/L [0.032 – 0.092 mg/L]
Median Residual C (mg/L) : 6.95 mg/L [4.4 – 12 mg/L]



MIC-guided TDM increases dosing success **from 41% to 90.6%** and **allows injection spacing up to an average of 10 weeks.**

CONCLUSION AND RELEVANCE

MIC-based dalbavancin dosing **improves target achievement and extends dosing intervals** in suppressive therapy, but requires further clinical validation.

REFERENCES : COJUTTI PG, RINALDI M, GATTI M, TEDESCHI S, VIALE P, PEA F. USEFULNESS OF THERAPEUTIC DRUG MONITORING IN ESTIMATING THE DURATION OF DALBAVANCIN OPTIMAL TARGET ATTAINMENT IN STAPHYLOCOCCAL OSTEOARTICULAR INFECTIONS: A PROOF-OF-CONCEPT. INTERNATIONAL JOURNAL OF ANTIMICROBIAL AGENTS. 1 NOV 2021;58(5):106445.