EARLY CLINICAL EXPERIENCE WITH DALBAVANCIN IN A TERTIARY HOSPITAL OF MADRID, SPAIN

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INTRODUCTION

- **Dalbavancin (DAL)** is a newly approved antimicrobial agent for the treatment of acute bacterial skin and soft tissue infections **(SSTI)** caused by **Gram-positive microorganisms** including methicillin susceptible (MSSA) and resistant (MRSA) *S. aureus, Streptococcus* spp*, Enterococcus spp and* coagulase negative staphylococci.
- Few studies have reported safety and efficacy of patients treated with DAL in daily clinical practice and information regarding non-FDA-labeled indications is even scarcer.
- The purpose of this study was to report **our clinical experience with DAL** in our large tertiary care institution mainly **in off label indications.**

METHODS

- This retrospective study included all adult patients who received at least 1 dose of DAL from **January 2016 to November 2016** at our institution.
- The primary objective was to describe the use of DAL in **clinical practice**, as well as the **outcome and tolerability** of the agent. We also tried to evaluate the potential **impact on reduction of length of hospital stay** and **costs** after DAL administration (considering an estimated cost of €325.01 for one day of hospitalisation in an internal medicine ward in Spain).

RESULTS

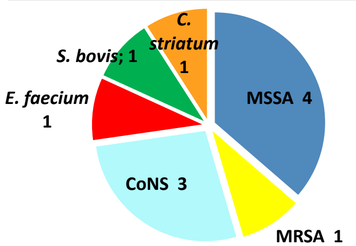
A total of **8 patients** received DAL during the study period (75 % male, median age 58), all of them as a targeted therapy (Table 1).

Table 1. Baseline patients' characteristics, previous treatments and dalbavancin treatment information

Characteristics	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8
Age (years)	75	58	57	69	58	38	40	54
Sex	Female	Male	Male	Female	Male	Female	Male	Male
Department	Cardiology	Gastroenterology	Nephrology	Cardiovascular surgery	Vascular surgery	Internal Medicine	Orthopaedics/ Traumatology	Orthopaedics/ Traumatology
Underlying disease	Diabetes mellitus Cardiovascular disease	Solid organ malignancy Child B cirrhosis	Diabetes Cardiovascular disease Hemodialysis	Cardiovascular disease	Diabetes mellitus	Cardiovascular disease	Neurological disorder HIV	Neurological disorder Solid organ malignancy
Charlson comorbidity index	2	7	6	3	3	2	3	9
Infection type	Pacemaker infection	Prosthetic joint infection	ABSSSI	ABSSSI	ABSSSI	Prosthetic valve IE	Osteomyelitis	Prosthetic joint infection
Causative microorganism	MSSA	CoNS	MRSA	MSSA CoNS	MSSA	*Streptococcus bovis*	MSSA *Enterococcus faecium*	CoNS
Prior antibiotic therapy	Meropenem Vancomycin	Aztreonam, Vancomycin Daptomycin, Linezolid	Ceftriaxone Vancomycin Daptomycin	Levofloxacin Clindamycin Vancomycin	Amoxicilin clavulanate Ciprofloxacin	Vancomycin Ceftriaxone Gentamicin	Piperacilin tazobactam Daptomycin, Levofloxacin, Cotrimoxazole	Teicoplanin
Prior antibiotic length	2 days	64 days	24 days	7 days	21 days	102 days	25 days	18 days
Main reasons for dalbavancin use	Easier administration	Easier administration Linezolid- induced trombopenia Daptomycin induced eosinophilic pneumonia	Renal failure Resistance to other antibiotics	Easier administration Resistance to other antibiotics	Easier administration Renal failure Interactions	Easier administration	Easier administration Poor adherence	Previous antibiotic failure
Dose and length	1g day 1, 0.5g day 8	1.5 g day 1	1.5g day 1	1 g, 0.5g day 8	1.5 g day 1	1.5g, 11 doses	1g day 1+ 4 doses 0.5 g	1g day 1, 5 doses 0.5 g
Adverse events	None	None	None	None	None	None	None	None
Outcome	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Required prolonged oral antibiotic suppression

Abbreviations: ABSSSI: acute bacterial skin and skin structure infections, CoNS: Coagulase negative *Staphylococcus*, HIV: human immunodeficiency virus, IE: infective endocarditis MSSA: meticillin-susceptible *Staphylococcus aureus*, MRSA: meticillin-resistant *S. aureus*.

Fig 1. Causative microorganisms



❖The median DAL administration doses was 4, corresponding to a median of 29 days of DAL exposure. Considering a hypothetical length of hospital stay with other antimicrobial agents of 71.6 days per patients, **DAL reduced the total days of hospitalization of 154 days** (26 days per patients), with total saving of about **€ 50.050.**

CONCLUSIONS

- Our study suggests that DAL is a **well-tolerated** and **effective** drug for treatment of **severe Gram-positive infections**.
- DAL can substantially **reduce the length of hospital stay**.
- Although additional data are needed, the **compassionate use** of DAL in our patients was found to be satisfactory.