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- Managing infective endocarditis (IE) requires aggressive, prolonged use of antimicrobials or a combination of antibiotics and surgery to control the infection source.
- Dalbavancin belongs to the lipoglycopeptide class of antimicrobial agents that act by interrupting bacterial cell wall synthesis, resulting in bacterial death.
- Dalbavancin was approved in the United States (US; 2014) and Europe (EU; 2015) to treat adults with acute bacterial skin and skin structure infection (ABSSSI).
- Dalbavancin allows for convenient parenteral administration for treating ABSSSI either in a single dose of 1500 mg or a dose of 1000 mg followed by 500 mg a week later.
- Dalbavancin is not licensed to treat IE, but it is potentially valuable for treating infections due to highly resistant gram-positive cocci (GPC).
- We evaluated dalbavancin activity and potency when tested against a large collection of GPC isolates responsible for IE.

- A total of 16,164 GPC were consecutively collected from patients with bloodstream infections (BSIs) in the US (8,807 isolates from 79 hospitals) and EU (7,357 isolates from 42 hospitals in 20 countries) from 2016 to 2020 via the International Dalbavancin Evaluation of Activity (IDEA) Program.
- The collection includes 323 organisms recovered from patients with IE, 106 from the US and 217 from the EU.
- Isolates were determined to be clinically significant based on local guidelines and were submitted to a central monitoring laboratory (JMI Laboratories, North Liberty, Iowa, USA).
- Participating laboratories initially identified isolates and JMI confirmed these bacterial identifications by standard algorithms supported by matrix-assisted laser desorption ionization-time of flight mass spectrometry (Bruker Daltonics, Bremen, Germany).

- Isolates were tested for susceptibility by broth microdilution following guidelines in the CLSI M07 (2018).
- The dalbavancin breakpoints approved by the US FDA and CLSI for indicated species were applied (i.e., 0.25 mg/L) and breakpoint criteria for comparator agents were from CLSI M100 (2021).
- Quality assurance was performed by concurrently testing CLSI-recommended quality control reference strains (ATCC 29213, ATCC 29212, and ATCC 49619).

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