Materials and Methods

**In Vitro Activity of Omadacycline Against Resistant Staphylococcus aureus**

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**Background:** Odamacycline is the first aminomethylcycline in late stage development for acute bacterial skin and skin structure infection (ABSSSI) as once-daily oral and IV formulation.

**Objectives:**

1. To evaluate the in vitro activity of odamacycline against resistant Staphylococcus aureus.
2. To determine the minimum inhibitory concentration (MIC) of odamacycline and comparators (doxycycline, tigecycline, linezolid, ceftaroline, levofloxacin, moxifloxacin, azithromycin and erythromycin) against Staphylococcus aureus, including methicillin-resistant (MRSA group), macrolide-resistant (eryA or C group) and chloramphenicol-resistant (gyrA and parC group) strains, isolated from respiratory tract or blood cultures sources.

**Materials and Methods:**

- **Strains:** A total of 239 resistant strains of S. aureus including methicillin-resistant (group 150), macrolide-resistant (eryA or C group) and chloramphenicol-resistant (gyrA and parC group) (95 strains). Strains were collected mostly from respiratory tract or blood cultures sources, between 1995 to present and were identified by standard methods such as described by Verschuren et al. (2005). Genetic DNA was isolated and multiple PCR were performed with primers specific for mecA, erm B and erm C or 23S for gyrA and parC.

- **Determination of MICs:** MICs were determined using the CLSI broth microdilution method.

**Results:**

- **Results of this study suggest that MIC may have in use infections caused by resistant S. aureus and highlights the potential utility of this oral and IV agent for the treatment of ABSSSI and CABP.**

- **Discussion:** Odamacycline demonstrated more consistent activity than other older tetracyclines, ketolides, macrolides, quinolones, oxazolidinone or third generation cephalosporins.

**Conclusion:**

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