Spectrum and Potency of Cefitobiprole Tested Against Staphylococci and Streptococci Recovered From Patients in Latin America (2005)

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Introduction
Ceftobiprole (BAY-61-3531), an investigational broad-spectrum cephalosporin with potent in vitro and in vivo activity against Gram-positive and -negative bacteria, is in clinical development for the treatment of complicated skin and skin-structure infections and hospital-acquired pneumonia. Ceftobiprole displays potent activity against most pathogenic Gram-positive bacteria, is stable to many penicillinases and has a strong ability for providing protection from β-lactamase inhibition. Ceftobiprole is a highly potent cephalosporin (MICs ≤ 0.06 µg/ml) against methicillin-resistant Staphylococcus aureus (MRSA) and coagulase-negative staphylococci (CoNS). This makes ceftobiprole an anti-staphylococcal therapeutic agent for the treatment and prevention of both penicillin-susceptible and -resistant pathogens.

Materials and Methods
Bacterial Isolates
- The study conform to the ethical guidelines of the ethical committee of the Clinical and Laboratory Standards Institute (CLSI) with infection control criteria.

Results
- Among Gram-positive bacterial pathogens recovered from Latin American medical centers in 2005, ceftobiprole inhibited all oxacillin-susceptible CoNS at 6.25 µg/ml.

Conclusions
- Among Gram-positive bacterial pathogens recovered from Latin American medical centers in 2005, ceftobiprole inhibited all oxacillin-susceptible CoNS at 6.25 µg/ml. While potent activity against oxacillin-susceptible CoNS is decreased to 6.25- to 8-fold for oxacillin-resistant staphylococci and penicillin-resistant pneumococci, results from this study suggest that target attainment for both oxacillin-susceptible and resistant populations is achieved.

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Results
- Ceftobiprole inhibited all tested Latin American oxacillin-susceptible strains at 6.25 µg/ml. 100% of the penicillin-susceptible Staphylococcus aureus (40) were inhibited by 0.25 µg/ml. All strains were inhibited by 0.5 µg/ml of ceftobiprole.

- Results for ceftobiprole and other agents at 6.25 µg/ml. MICs for oxacillin resistance in Latin American medical centers in 2005, ceftobiprole inhibited all oxacillin-susceptible CoNS at 6.25 µg/ml.

- While potent activity against oxacillin-susceptible CoNS is decreased to 6.25- to 8-fold for oxacillin-resistant staphylococci and penicillin-resistant pneumococci, results from this study suggest that target attainment for both oxacillin-susceptible and resistant populations is achieved.

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References