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PHARMACODYNAMIC PROPERTIES OF MEROPENEM AGAINST *STAPHYLOCOCCUS AUREUS*

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ABSTRACT: The aim of this paper is to study the pharmacodynamics of Meropenem against locally isolated and identified *Staphylococcus aureus*, for this purpose each of MIC, MBC, PAE, MPC and MBIC indices had been utilized; results found that the value of MIC of Meropenem against *S. aureus* (strain LOC-M2020) was 4 µg/ml, the values of MBC, MPC and MBIC were 8 µg/ml for each of them, while the time that the effect of Meropenem against *S. aureus* could remain even after Meropenem concentration drops below the MIC value in the medium might be last for 0.61 h. Our study provided prospective *in-vitro* pharmacodynamic information to be in use for dose optimization, establishing of dosage regimens and prevention of further expected bacterial resistance. In conclusion, Meropenem possesses an efficacious profile against *S. aureus* as same as other sensitive bacteria, which qualifying it to be a potential candidate to eradicate the complicated infections that *S. aureus* cause like clinical mastitis in case it licensed to be in use in veterinary therapy in future.

Key words: Meropenem, pharmacodynamics, *S. aureus*, MIC.

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