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Antibiotic susceptibility profile of commensal *Staphylococcus aureus* isolates

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The increase of community-associated and hospital-acquired infections with *Staphylococcus aureus* accompanying with the raise of antibiotic resistant isolates particularly multi-drug resistant (MDR) ones recently has become a serious clinical and epidemiological problem. In this study, 51 *S. aureus* isolates obtained from healthy volunteers in Southern Vietnam were analyzed in order to determine their drug susceptibility to twelve commonly used antibiotics including ampicillin, cefoxitin, chloramphenicol, ciprofloxacin, clindamycin, erythromycin, kanamycin, linezolid, meropenem, rifampin, tetracycline and trimethoprim/ sulfamethoxazole by using disc diffusion technique. The resistant rate of *S. aureus* isolates to vancomycin was also determined by using minimum inhibitory concentration method. Antibiotic sensitivity test demonstrated that most of the isolates were resistant to ampicillin (96.08%). Meanwhile the resistant rates to clindamycin, kanamycin, erythromycin, linezolid, tetracycline and ciprofloxacin were in the range of 28%-61%. In addition, few antibiotics still have strong effect on *S. aureus* such as cefoxitin (resistant rate- 15.69%), meropenem (13.73%) chloramphenicol (5.88%), trimethoprim/sulfamethoxazole, rifampin (1.96%) and particularly vancomycin (0%). Moreover, the rate of MRSA in southern Vietnam community is estimated via cefoxitin resistant percentage which is around 16%, doubled the rate announced in 2004. In conclusion, the data provided essential information on the antibiotic susceptibility profile of *S. aureus* isolates in Vietnamese community.

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Biapenem for treatment of diabetic foot infection: A case series

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Introduction: Biapenem is a parenteral carbapenem antibiotic that has powerful antibacterial activity. The aim of this study is to evaluate the efficacy and safety of biapenem for the treatment of diabetic foot infection.

Findings: A total of 200 patients presenting to tertiary care medical centers with severe diabetic foot infection and suspected diagnosis of osteomyelitis and biapenem use from 01/2014 to 02/2015 were screened, and 20 patients met inclusion criteria for this study. Mean age was 56.25±12.47 years, 40% were male, 85% were Central Asian Arabic, and the most common comorbidities included, peripheral vascular disease (82%), hypertension (74%), dyslipidemia (82%) and history of tobacco use (55%). Over half of the patients presented to out-patient clinic or emergency room more than six months after the onset of symptoms. Bone culture was obtained for diagnostic guidance in 8 cases; and surgical intervention was performed in 18 cases. Patients received a mean duration of 19.8±12.23 days of therapy, and in 80% of cases, subsequent oral antibiotics were used. Three cases were treated as out-patient. 16 (80%) patients met criteria for clinical success, defined as resolution of clinical signs and symptoms of infection such that wound healing and discontinuation of antibiotics. The treatment was seemed appropriate at end of biapenem therapy, without recurrence at one year follow-up. No adverse drug effects were noted.

Conclusions: In this case series of mostly severe, lower extremity diabetic foot infection, an average 20 days course of empiric biapenem was well-tolerated with curative rates of 80% at one year and three cases were treated as out-patient.

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