

# 高劑量治療萬古黴素抗藥性腸球菌非複雜性菌血症之早期經驗

## Early Experience of High Dose Daptomycin for the Treatment of Uncomplicated Vancomycin-resistant Enterococcal Bacteremia

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Daptomycin is a rapidly bactericidal and concentration dependent antibiotic. In vitro, it can actively against most clinically relevant gram-positive bacteria, including vancomycin-resistant enterococci (VRE) and Methicillin-resistant *Staphylococcus aureus* (MRSA). Daptomycin was approved for the treatment of complicated skin and skin structure infection, MRSA bacteremia and right-sided endocarditis at a dose of 4-6 mg/kg/day intravenously, but its efficacy and safety at higher doses for VRE bacteremia have not been established.

An observational post marketing study of Daptomycin for the treatment of VRE bacteremia was conducted between Jan, 01, 2009 and Sep, 30, 2009 in a medical center in northern Taiwan. There are seven patients with VRE bacteremia were enrolled in this study and received high doses Daptomycin (8-10 mg/kg/day) treatment. The primary outcome was the clinical success rate at the visit 30 days after the end of therapy. Antimicrobial susceptibility was performed by a central laboratory with the use of the guidelines established by the Clinical and Laboratory Standards Institute (CLSI). Patients were considered to have clinical failure if they had no response to Daptomycin on the basis of ongoing signs and symptoms of infection. Microbiologic failure was defined as if they had persistent or relapsing VRE bacteremia. The definition of uncomplicated bacteremia was that the isolation of vancomycin-resistant enterococci from enrollment blood cultures in patients without endocarditis and without evidence of embolic lesion by hematogenous spread.

Among these seven uncomplicated VRE bacteremia cases, there were four patients had concurrent blood stream and urinary tract infection. Six isolates were *E. faecium* and one was *E. faecalis*. The susceptibility test of Daptomycin, Tigecycline, Linezolid were 100% susceptible for VRE respectively (Table 1). All isolates were non-susceptible to vancomycin, Teicoplanin, Ampicillin, Gentamicin (120), Penicillin and Erythromycin respectively. All genotypes of *E. faecium* are Van-A type. The genotype of *E. faecalis* was Van-B type. The MIC of vancomycin of these seven isolates are all more than 128 µg/mL. The MIC of Daptomycin for VRE ranged from 1.0 to 4.0 µg/mL.

The demographic data of patients were summarized as Table 2. The duration of Daptomycin administration ranged from 14 days to 21 days. Only one patient had non-significantly increased creatine kinase level (table 3). No renal function deterioration was noted in our study. The successful rate was 100% at 30 days after the end of therapy.

The efficacy and safety of high dose Daptomycin for uncomplicated VRE bacteremia had the good clinical outcome in our study. But the MIC of Daptomycin is relative higher than Tigecycline and Linezolid.

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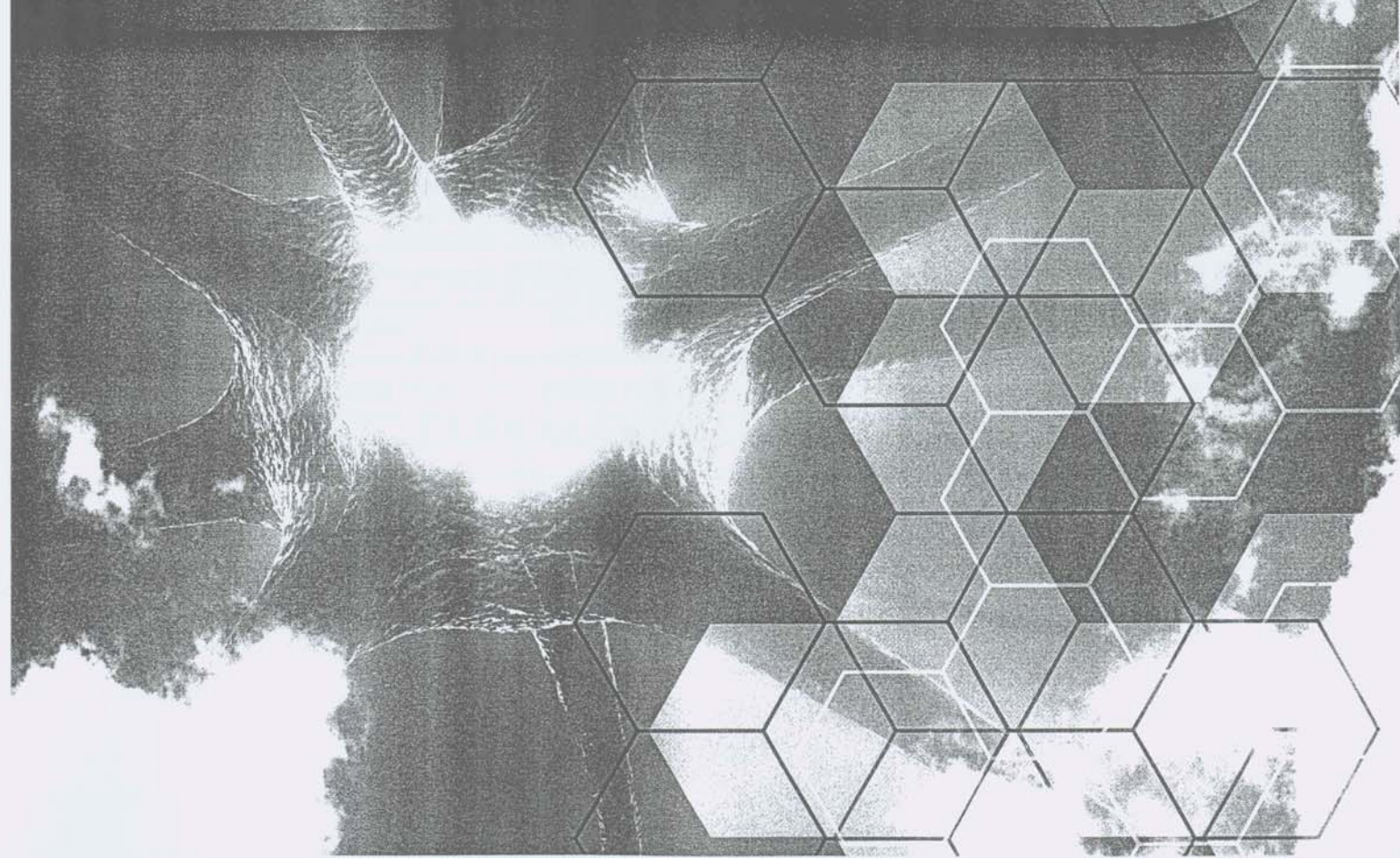
THE INFECTIOUS DISEASES SOCIETY OF TAIWAN

第八屆第二次 會員大會暨學術討論會

## 大會手冊

時間：99年1月9-10日

地點：台北榮總致德樓



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