Analysis of β-lactamase genes in multidrug-resistant *Acinetobacter baumannii* isolated from a hospital in the southwest of China

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*Acinetobacter baumannii* is an opportunistic pathogen of hospital-acquired infection. The aim of this study was to analysis the β-lactamases genes prevalence in *Acinetobacter baumannii* isolated from a hospital in the southwest of China. In this study, 87 *A. baumannii* strains isolated from a hospital in southern of Sichuan province that were tested for antibiotic susceptibility performed by determination the MIC, molecular genotyping by multilocus sequence typing (MLST) and more importantly, the prevalence of β-lactamases genes (including *blaOXA-23, blaOXA-24, blaOXA-58, blaGIM, blaSPM, blaSIM, blaNDM, blaCTX-M, blaSHV* and *blaTEM*) were studied by PCR method. Antibiotic susceptibility test against 13 commonly used antibiotics indicated that most of the stains showed multidrug-resistance. And the result of MLST analysis showed that there were 5 STs in the 87 *A. baumannii* isolates and a majority of them was ST195 (69/87). The PCR amplification and sequencing results illustrated that most of these isolates were positive to *blaOXA-23* and *blaTEM* genes and the prevalence of them were 74.71% and 93.10% respectively. In addition, 1 positive strain for the *blaGIM*, 1 positive strain for the *blaSIM*, 1 positive strain for the *blaSHV* and 2 positive strains for the *blaSPM* were found. However, all of the isolates were negative to the rest β-lactamases genes detected including *blaOXA-24, blaNDM* and *blaCTX-M*. In conclusion, the 87 *A. baumannii* isolates in this study showed severe drug resistance and the main β-lactamases genes carried were *blaOXA-23* gene and *blaTEM* gene.

Biography

Ying Shun Zhou has completed his PhD from Sichuan University. He presently works in the Southwest Medical University and is the Director of Pathogenic Microbiology Laboratory. He has published more than 10 papers in reputed journals and has been serving as a Member of Chinese Medical Association.

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