

Antimicrobial susceptibility pattern and distribution of ExoU and exoS in clinical isolates of *Pseudomonas Aeruginosa* at a Malaysian hospital.

ABSTRACT

This study was conducted to determine the antibiotic susceptibility pattern and distribution of exoU and exoS among 44 clinical isolates of *P. aeruginosa* collected from different patients over a 3-month period in 2010 at a major Malaysian hospital. Susceptibility data by disk diffusion method for cefepime (30 µg), ceftazidime (30 µg), gentamicin (10 µg), piperacillin-tazobactam (100/10 µg) and ciprofloxacin (5 µg) were available for 38 isolates. Resistance to ceftazidime and piperacillin-tazobactam was the most common (74%) with five isolates not susceptible to three or more different antibiotics. PCR detection of exoU and exoS of all 44 isolates showed the former gene to be present in 18 and exoS in 41. In analyzing the two genes together, 17 isolates were detected for exoU and exoS with only two being negative for both genes. Only one isolate was detected for exoU alone whereas 24 for exoS alone. Distribution of the genes in relation to antibiotic susceptibility was inapplicable due to the majority of the isolates having similar susceptibility patterns, but the tendency of exoU-carrying isolates to be present in male patients (83%) and respiratory sites (61%) was observed ($p < 0.050$). The finding warrants further investigation in a larger sample of isolates.

Keyword: Antibiotic susceptibility; exoS; exoU; *Pseudomonas aeruginosa*.