

## 4176557033 : MAJOR PHARMACY

KEY WORD: AMIKACIN/ ONCE DAILY DOSING/ EVERY 12 HOURS DOSING/ CHILDREN

JUTAMAT TITIPANKUL : ONCE DAILY VERSUS EVERY 12 HOURS DOSING OF AMIKACIN  
IN THAI CHILDREN AT QUEEN SIRIKIT NATIONAL INSTITUTE OF CHILD HEALTH. THESIS  
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The objective of this study was to compare the serum level, efficacy and nephrotoxicity of amikacin administrated as once daily dosing versus every 12 hours dosing in pediatric patients at Queen Sirikit National Institute of Child Health (The Children hospital). In this study total of 31 patients was given 15-22.5 mg/kg of amikacin by intravenous infusion over 30-60 minutes once daily (group I), whereas 27 patients received the same dose of amikacin divided every 12 hours (group II).

The results showed that all 58 patients, the once daily dosing group and the every 12 hours dosing group had mean steady state amikacin peak concentration of  $27.58 \pm 11.85$  mcg/mL and  $16.23 \pm 7.56$  mcg/mL, respectively ( $P < 0.001$ ). The steady state amikacin trough concentrations of 45 patients (77.6%) had very low and unmeasurable ( $< 0.8$  mcg/mL), but those of 13 patients (22.4%) were reported. Of these patients, 6 patients (19.4%) were in group I and 7 patients (25.9%) were in group II. The efficacy of treatment with amikacin in both groups was not significantly different. Regarding patients with pneumonia in both groups, the efficacy was not significantly different. The patients of group I had the tendency to receive lower total dose of amikacin than group II ( $P < 0.05$ ) but the duration of treatment in both groups was not significantly different. There was no nephrotoxicity found in any group. The once daily dosing of amikacin could be possibly an appropriate regimen for Thai pediatric patients.

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