

INTISARI

Gentamisin merupakan antibiotik pada terapi empiris khususnya infeksi bakteri gram negatif. Gentamisin memiliki indeks terapi sempit serta bersifat nefrotoksik. Pencegahan nefrotoksitas dan peningkatan efektivitas terapi gentamisin dapat dilakukan dengan menyesuaikan regimen dosis berdasarkan nilai klirens kreatinin pasien. Penelitian bertujuan mengevaluasi rasionalitas dosis gentamisin serta mengetahui hubungan rasionalitas dosis dengan efektivitas terapi gentamisin dan efek peningkatan serum kreatinin.

Penelitian ini menggunakan rancangan *cross sectional* dilakukan di RSUP Kariadi Semarang. Sejumlah 129 rekam medis pasien rawat inap tahun 2018- 2019 dipilih menggunakan teknik *purposive sampling*. Kriteria inklusi meliputi usia pasien 18 tahun ke atas, menggunakan gentamisin injeksi minimal 3 hari, terdapat data serum kreatinin minimal sebanyak dua kali (sebelum dan sesudah penggunaan injeksi gentamisin). Efektivitas terapi terbagi menjadi membaik dan tidak membaik berdasarkan rekam medis pasien. Peningkatan serum kreatinin ditunjukkan dengan kenaikan sebesar 0,5 mg/dl atau lebih. Statistik bivariat *Fisher exact test* digunakan untuk mengetahui hubungan kedua variabel.

Hasil penelitian menunjukkan dosis rasional terdapat pada 19 (14,73%) pasien dimana 15 (11,63%) pasien memberikan hasil terapi membaik dan terjadi peningkatan serum kreatinin (SCr) lebih dari 0,5 mg/dl pada 5 (3,88 %) pasien. Sedangkan dosis tidak rasional terdapat pada 110 (85,27%) pasien dimana 52 (40,31%) pasien memberikan hasil terapi membaik dan 31 (24,03%) pasien terjadi peningkatan SCr. Rasionalitas regimen dosis memiliki hubungan signifikan dengan efektivitas terapi ($p < 0,05$) namun tidak memiliki hubungan signifikan dengan peningkatan serum kreatinin ($p > 0,05$). Peran farmasis diperlukan dalam monitoring terapi pasien sehingga diharapkan dapat meningkatkan optimasi terapi dan menurunkan efek samping.

Kata kunci; Rasionalitas dosis, gentamisin, efektivitas terapi, peningkatan serum kreatinin

ABSTRACT

Gentamicin is antibiotic used as empirical therapy, especially for gram-negative bacterial. Gentamicin has narrow therapeutic index and nephrotoxicity. Prevention nephrotoxicity and increasing the effectiveness of gentamicin therapy can be done by adjusting the dosage regimen based on the patient's creatinine clearance value. This study aims to identify the rationality of gentamicin dose and determine the relationship between dose rationality and the effectiveness of gentamicin therapy and the effect of increasing serum creatinine in RSUP Dr. Kariadi Semarang.

This study used a cross sectional design in RSUP Dr. Kariadi Semarang. A total of 129 medical records of inpatients in 2018-2019 were selected using the purposive sampling technique. Inclusion criteria included the age of patient 18 years and over, there was information on serum creatinine at least twice (namely before and during or after receiving gentamicin therapy for at least 3 days/ 72 hours). effectiveness of therapy was divided into improve and not improve based of medical record. An increase in serum creatinine is defined as an increase in serum creatinine 0.5 mg/dL or more than from baseline values. Bivariate statistics Fisher exact test was used to determine the relationship between the two variables.

A total of 19(14.73%) patients received a rational dose of gentamicin where 15 (11.63%) patients gave improved therapeutic and an increase in creatinine serum (sCr) of more than 0.5 mg/dl in 5 (3.88%) patients. A total of 110 (85.27%) patients received a irrational dose of gentamicin where 50 (38,76%) patients gave improved therapeutic results and an increase in sCr of more than 0.5 mg/dl in 31 (24,03%)patients. The rationale of the dose regimen had a significant relationship with the effectiveness of therapy ($p<0,05$) and did not have a significant relationship with the effect of increasing serum creatinine ($p>0,05$). Pharmacists is needed in monitoring patient therapy so that it is expected to increase effectiveness therapy and reduce side effects

Keywords: Dosage rationale, gentamicin, therapeutic efficacy, increase in serum creatinine