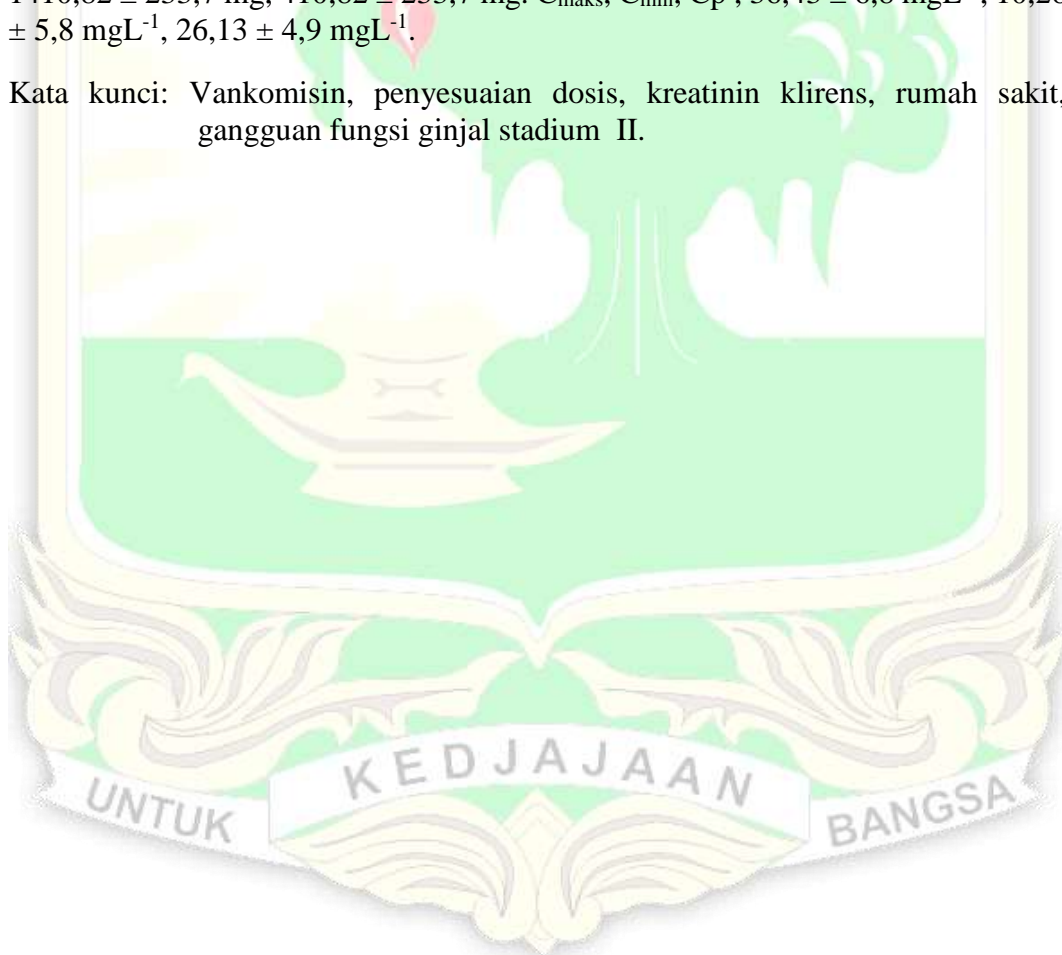


## ABSTRAK

Vankomisin merupakan antibiotika indeks terapi sempit yang dihasilkan oleh *Streptomyces orientalis* (1956). Vankomisin dieliminasi sebanyak 90 % dalam bentuk utuh melalui urin. Gangguan fungsi ginjal mengakibatkan penurunan kemampuan ginjal melakukan eliminasi zat-zat yang tidak diperlukan tubuh termasuk obat. Penelitian ini bertujuan untuk menentukan pengaturan dosis vankomisin yang tepat dan efektif. Penelitian ini dilakukan secara observasi retrospektif dan prospektif terhadap 23 rekam medis pasien pada bulan Juni – November 2015. Delapan orang pasien gangguan fungsi ginjal stadium dua diterapi dengan vankomisin. Dosis Individual dihitung menggunakan persamaan dosis farmakokinetika. Persentase pasien yang menerima dosis 1 g dan 2 g secara infus intravena perhari adalah 62,5% dan 37,5% pasien yang menerima dosis sesuai berdasarkan persamaan dosis farmakokinetika adalah 87,5%.  $T_{1/2}$ ,  $K_e$ ;  $9,14 \pm 2,1$  jam,  $0,079 \pm 0,016$  jam<sup>-1</sup>. Jumlah fraksi dosis obat adalah  $0,28 \pm 0,1$  %,  $D_{maks}$ ,  $D_{min}$   $1410,82 \pm 233,7$  mg,  $410,82 \pm 233,7$  mg.  $C_{maks}$ ,  $C_{min}$ ,  $C_p$ ;  $36,43 \pm 6,8$  mgL<sup>-1</sup>,  $10,26 \pm 5,8$  mgL<sup>-1</sup>,  $26,13 \pm 4,9$  mgL<sup>-1</sup>.

Kata kunci: Vankomisin, penyesuaian dosis, kreatinin klirens, rumah sakit, gangguan fungsi ginjal stadium II.



## ABSTRACT

Vancomycin is a narrow therapeutic index antibiotic which is produced by *Streptomyces orientalis* (1956). Vancomycin is eliminated 90% mainly in the urine as parent drug. Renal impairment decreases renal's ability to eliminate substance including drug. The present study aim was to determine a proper and effective dosage regiment of vancomycin based on patient's condition. The observations were conducted retrospectively and prospectively to 23 patient's medical records started from June to November 2015. Eight patients that have experience stage 2 renal failure were treated using vancomycin. Individualization dose of vancomycin was estimated using pharmacocinetic dosing method. The percentage of patients receiving vancomycin intravenously at the dose 1 and 2 g daily were 62.5 and 37.5% respectively. Based on the data showed that 87,5% patients prescribed vancomycin appropriate.  $T_{1/2}$  and  $K_e$  were  $9.14 \pm 2.1$  h;  $0.079 \pm 0.016$  h<sup>-1</sup>.  $D_{maks}$  and  $D_{min}$  were  $1410.82 \pm 233.7$ ,  $410.82 \pm 233.7$  mg respectively.  $C_{maks}$  and  $C_{min}$  were obtained as  $36.43 \pm 6.8$  and  $10.26 \pm 5.8$  mgL<sup>-1</sup> respectively while the accumulation factor (f) and  $C_p^0$  were  $0.28 \pm 0.1$  % and  $26.13 \pm 4.9$  m/L<sup>-1</sup> respectively.

Keywords: Vancomycin, dosage adjustment, creatinine clearance, hospital, stage 2 renal failure

