

# CONTINUOUS INFUSION VANCOMYCIN, A CASE REPORT

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## BACKGROUND

The administration of continuous infusion vancomycin is an alternative of administration of this drug.

## PURPOSE

Evaluate the clinical efficacy and incidence of adverse effects with the regimen of vancomycin in continuous infusion, a case report.

## MATERIAL AND METHODS

Observational and retrospective study of the use of vancomycin in a child diagnosed with Ganglioneuroblastoma L2.

The information has been obtained from the electronic clinical history (SELENE®) and the Pharmacy Service Managing software (FARMATOOLS®).

The program used for monitoring pharmacokinetics of drugs is the PKS.

## RESULTS

Patient with 4 year old was admitted to the pediatric ward of a hospital with febrile neutropenia after receiving the second cycle of chemotherapy (cyclophosphamide+vincristine+adriamycin).

It started empirical antibiotic therapy: vancomycin (15 mg/kg/6 h) and amikacin (15 mg/kg/24 h).

Vancomycin trough levels obtained during the first 3 days of treatment were very low levels (2 mcg/mL) so it started continuous infusion of vancomycin. It was prescribed with 60 mg/kg/24 h of vancomycin, obtaining a steady-state plasma concentration (C<sub>ss</sub>) of 12.1 mcg/mL. Optimal levels C<sub>ss</sub> vancomycin for prophylaxis treatment are 15-20 mcg/mL. By persisting fever and worsening of clinical status of boy, it increased the dose of vancomycin at 70 mg/kg/day and optimal plasma levels were obtained (17.5 mcg/mL).

The dose of amikacin was maintained at 15 mg/kg/24 h obtaining optimal plasma levels (trough level <1 mcg/mL and peak level: 30-40 mcg/mL).

Antibiotic treatment was continued for 7 days and the child had a good response.

## CONCLUSION

The administration of continuous infusion vancomycin reached therapeutic levels with good clinical efficacy and no evidence of renal injury, so it is a therapeutic strategy for patients with low levels drugs in plasma.

Moreover, it is a more comfortable administration, decreased nursing workloads and less manipulation of intravascular catheters.

We need more pediatric studies to evaluate the efficacy and safety of these patients using this type of administration.

