PHARMACOTHERAPEUTICS MONITORING ANALYSIS OF VANCOMYCIN IN THE PHARMACEUTICAL SERVICE

PKP-011

Barradas V.¿ Ratão I.; Guimarães A.; Dimas F.; Miranda, R.; Gaspar, A.

Pharmacy Centro Hospitalar Barreiro-Montijo (CHBM), EPE, Portugal

Background:

Vancomycin is a widely used antibiotic in nosocomial infections by methicillin-resistant staphylococcus aureus, a major cause of death, justifying the strict controls on its use as well as serum drug level monitoring to prevent the emergence of resistant strains and increasing likelihood of therapeutic success.

Objective:

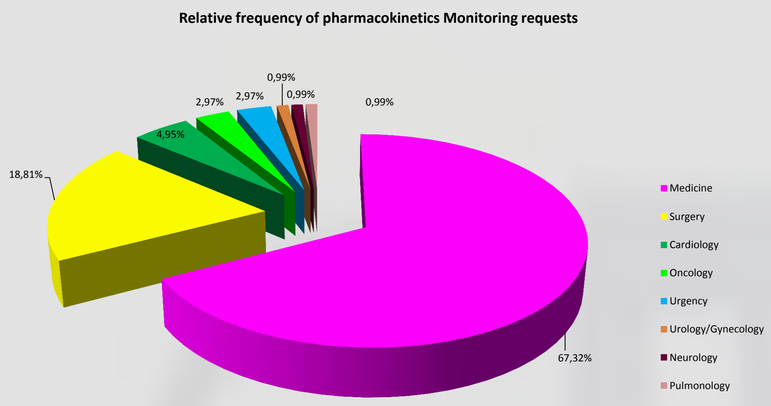
To evaluate pharmaceutical interventions regarding their impact on the initial regimen.

Methods:

A retrospective observational study of patients to whom pharmacokinetic monitoring of vancomycin in the year 2013 was requested. The evaluated parameters were obtained from computer applications Kinetidex, Clinidata Net and pharmacotherapeutic profile: creatinine, dosage, first dosed serum level and suggested dosage.

Results:

433 serum drug level monitoring of vancomycin were performed. Of the total 159 patients, 63.5% were subjected to pharmacokinetic monitoring, reflecting 4.29 serum drug level monitoring per patient.



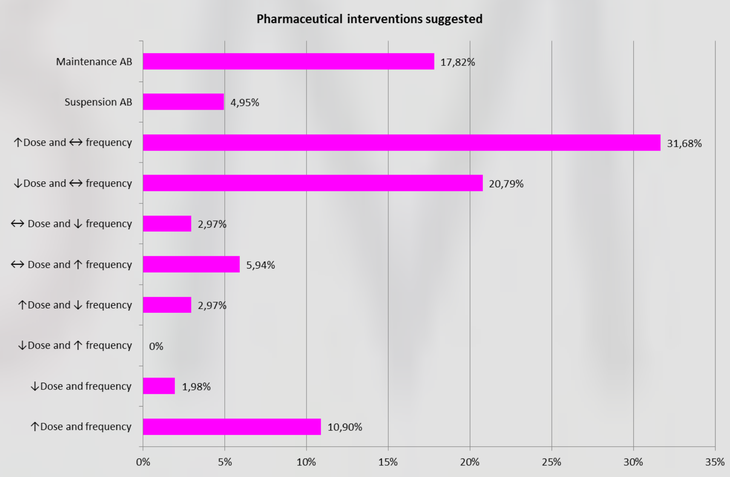
61.4% patients received vancomycin, in an intermittent regimen, 38.6% received it by continuous infusion, of these only 46.2% did loading dose.

The average trough of dosed serum level is 14.07µg/ml and intermediate dosed serum level in continuous infusion regimen is 23.14 µg/ml.

It was found that 40% of the dosed serum level trough in intermittent regimen are within the reference values (10-15 µg/ml), 30% of dosed serum level are above and 30% are below.

In the continuous infusion, 13.9% of intermediate dosed serum level were within the reference values (20-25 µg/ml), 33.3% were above and 52.7% were below.

Most pharmaceutical interventions were aimed at maintaining the dosing interval, reflecting the interventions in increasing doses (31.68%) or decreasing doses (20.79%).



Discussion/Conclusion:

A dosed serum level lower than the reference values is not effective in the control of infection with the potential emergence of resistant strains. High dosed serum level above the reference values may cause toxic effects.
The loading dose is essential to quickly reach therapeutic serum drug levels.
This differentiated pharmaceutical intervention contributes to improved health outcomes and strengthens its regulatory framework in multidisciplinary health teams.

Acknowledgements:

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