

VANCOMYCIN: CONCORDANCE OF DOSAGE ADJUSTMENT ACCORDING TO MINIMUM PLASMA CONCENTRATION AND AREA UNDER THE CURVE/MINIMUM INHIBITORY CONCENTRATION

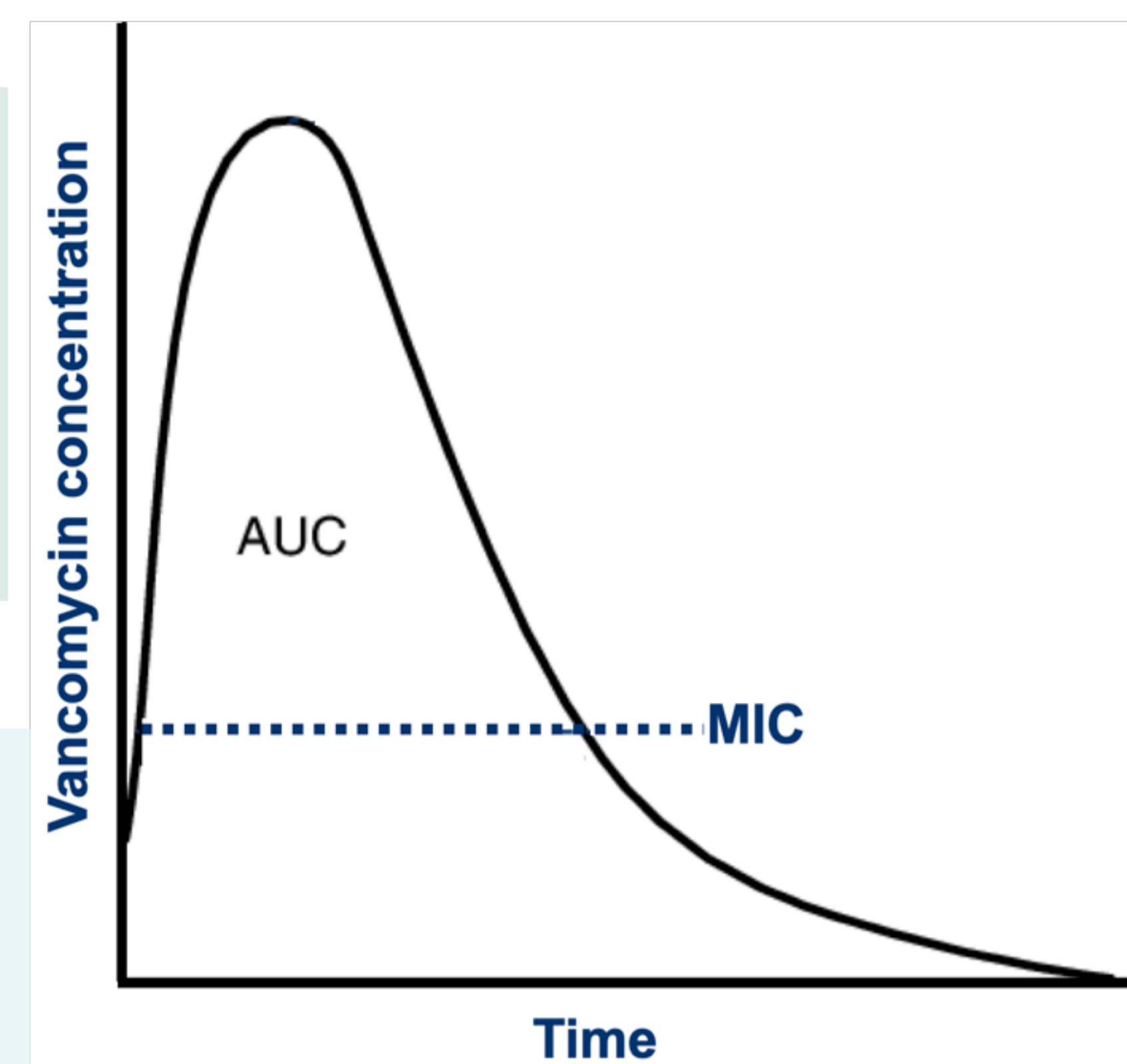
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Background and Importance

The pharmacokinetic/pharmacodynamic (PK/PD) target for vancomycin has recently been defined as an area under the curve (AUC) over 24 hours/minimum inhibitory concentration (MIC) of 400-600.

Aim and Objectives

To evaluate the degree of concordance of recommendations after dose adjustment of vancomycin according to minimum plasma concentration (Cmin) and AUC/MIC ratio.



Material and Methods

Retrospective study: adult patients who were treated with vancomycin and monitored

Variables collected: sex, age, weight, height, glomerular filtration rate, total daily dose and recommendation issued based on the determination of Cmin and AUC/MIC.

Appropriate Cmin: 15-20µg/mL in complicated infection and 10-15µg/mL in all other infections.

Interpretation and adjustment: MediWare Pharm++® software using a bicompartimental model and a single vancomycin level (Cmin). For the calculation of AUC/MIC, MIC=1µg/mL was assumed.

Results

N = 42 patients

The recommendation issued was concordant via Cmin and AUC/MIC in 35,7%.

In the case of discordance, overexposure was observed in 66,6% of cases.

Parameters	Result
Female	52,4%
Age	72,3±12,3y
Weight	81,8±17,9kg
Height	163,8±7,9cm
Glomerular filtration rate	61,5±27,0ml/min/ 1,73m ²
Total daily dose	1.878,5±524,8mg

Conclusion and relevance

Approximately 2/3 recommendations were discordant, with a high number of overexposures observed in the case of recommendations based on Cmin.

Monitoring according to AUC is considered necessary.

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