THERAPEUTIC DRUG MONITORING OF VANCOMYCIN IN ONCOLOGIC AND HAEMATOLOGIC PATIENTS: REAL-WORLD DATA

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BACKGROUND AND IMPORTANCE

Vancomycin clearance tends to be higher in patients with neutropenia; consequently, therapeutic drug monitoring (TDM) is highly recommended.

AIM AND OBJECTIVES

To assess the achievement of a therapeutic pharmacokinetics/pharmacodynamics (PK/PD) target of vancomycin in oncologic and haematologic patients using trough-only TDM.

MATERIAL AND METHODS

Retrospective and descriptive study

Oncologic and haematologic patients who started treatment with vancomycin

TDM used the PKS® software. 15-20 mg/kg/dose and trough levels between 10 and 20 µg/ml were considered optimal

RESULTS

N determinations

49 patients
- 12 oncologic
- 37 haematologic

Initial mean dosage

13,7±2,5mg/kg/12h
(except for three patients who started every 24h because of renal impairment)

After dosage adjustment

- 18 patients → 14±3mg/kg/8h
- 12 patients → 13,6±7,6mg/kg/12h
- 19 patients → No dosage adjustment

Mean duration treatment

7±4,2 days

Reason for stopping treatment

- Clinical improvement (n=29)
- Switch to a target treatment (n=10)
- Clinical deterioration (n=9)
- Nephrotoxicity (n=1)

DOSAGE ADJUSTMENT

39% (19 patients)

51% (25 patients)

10% (5 patients)

- Subtherapeutic level (<10 µg/ml)
- Supratherapeutic level (>20 µg/ml)
- Level in therapeutic range

CONCLUSION AND RELEVANCE

- More than half of the patients had subtherapeutic vancomycin levels and required antibiotic dose adjustment.
- Most patients required shorter dosing intervals rather than increased doses to reduce the incidence of nephrotoxicity.