

MONITORING OF VANCOMYCIN IN 62 PATIENTS WITH CENTRAL NERVOUS SYSTEM INFECTIONS

PKP-012

F. Franco-García¹, I. Viguera-Guerra¹, MD. Aumente¹.
¹Hospital Universitario Reina Sofía de Córdoba, Pharmacy Department, Córdoba, Spain.

Purpose

To evaluate the efficacy and safety of vancomycin in CNS infections, and the influence of its pharmacokinetic monitoring.

Material and methods

Descriptive and retrospective study which included all patients with CNS infection treated with vancomycin and monitored. Patients aged under 18 and those who received less than 5 days of treatment with vancomycin were excluded.

Results

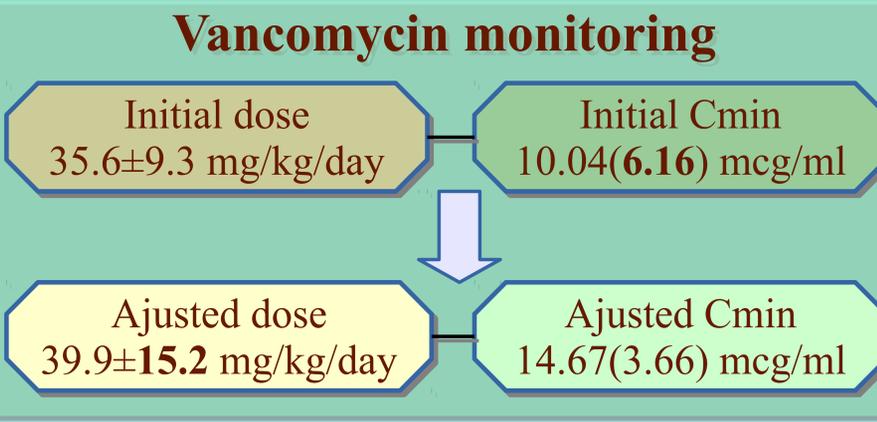
	All patients (N=62)	With previous surgical intervention (N=39)	Without previous surgical intervention (N=23)
Age	51.4±18.4	52.2±17	50.1±21
Sex			
Male	30 (48.4%)	17 (43.6%)	13 (56.5%)
Female	32 (51.6%)	22 (56.4%)	10 (43.5%)
Weight (kg)	74.5 (12.5)	75 (10)	70 (15)
Size (cm)	165 (10)	165 (10)	170 (5)
Diagnose			
Meningitis	32 (51.6%)	11 (28.2%)	21 (91.3%)
Fistula of CSF infection	13 (21.0%)	13 (33.3%)	0 (0.0%)
Shunt infection	13 (21.0%)	13 (33.3%)	0 (0.0%)
Cerebral abscess	2 (3.2%)	0 (0.0%)	2 (8.7%)
ventriculitis	2 (3.2%)	2 (5.2%)	0 (0.0%)
Site diagnose			
ICU	11 (17.7%)	7 (17.9%)	4 (17.4%)
Other hospital unit	51 (82.3%)	32 (82.1%)	19 (82.6%)
Nosocomial infection	34 (54.8%)	31 (79.5%)	3 (13.0%)
Cancer	20 (32.3%)	18 (46.2%)	2 (8.7%)
Neurological condition	43 (69.4%)	39 (100.0%)	4 (17.3%)
Glioblastoma	18 (29.0%)	18 (46.2%)	0 (0.0%)
SAH	10 (16.1%)	10 (25.6%)	0 (0.0%)
TBI	2 (3.2%)	1 (2.6%)	1 (4.3%)
Other	13 (21.0%)	10 (25.6%)	3 (13.0%)
Concomitant treatment with corticoids	28 (45.2%)	17 (43.6%)	11 (47.8%)
Length of hospital stay (days)	38.5 (34.5)	49 (23)	18 (14)
Others concomitant infections	20 (32.3%)	14 (35.9%)	6 (26.1%)

Tabla 1. Clinical and demographic characteristics

Antibiotic	Empiric treatment (N=62)	Specific tratment (N=34)
Meropenem	29 (46.8%)	8 (23.5%)
Ceftriaxon	14 (22.6%)	4 (11.8%)
Ceftazidime	7 (11.3%)	1 (2.9%)
Rifampicin	6 (9.8%)	3 (8.8%)
Ampicilin	5 (8.1%)	3 (8.8%)
Metronidazole	2 (3.2%)	1 (2.9%)

Tabla 2. Concomitant treatment

The infection pathogen was isolated in 39 sample of CSF.
 All isolated microorganisms were susceptible to vancomycin
 63.7% of the isolated microorganisms were coagulase-negative Staphylococcus, with a MIC=2 in 23.7%.



Laboratory-confirmed CSF clearance was obtained in 26 of the 39 isolates 73.1% during the first 10 days of therapy.

The overall mortality was 5.8%, but just one death was related with CNS infection.

Although Cmin above 20 mcg/ml was registered in 15 patients, none developed nephrotoxicity.

Conclusion

Vancomycin is an effective and safe treatment for CNS infections. Correct monitoring is crucial to optimize the treatment and minimize the occurrence of nephrotoxicity.

