

ADJUST DOSES OF ANTIBIOTICS IN ACUTE RENAL FAILURE: **PHC012**

THE ROLE OF HOSPITAL PHARMACIST

J.E. Poquet-Jornet¹, A. Munilla-Das¹, C. Cuesta-Grueso¹, F.J. Carrera-Hueso², S. Sanchez-Aranda¹.

¹Hospital Denia, Farmacia, Denia, Spain.

²Hospital Dr. Moliner, Farmacia, Valencia, Spain.

17 th EAHP Congress. Milan, Italy 21-23 March 2012.

Objectives

Many clinicians, unassisted by reference books, are unable to make the required dose adjustment of antibiotics needed when a patient has renal insufficiency. Dosage adjustment to renal function is an important aspects of rational antibiotic prescription. The hospital pharmacist plays an important role in validating the clinical use of drugs. Evaluation of the Pharmacy Department recommendations about antibiotic dose adjustment in patients with serum creatinine greater than 1.2 mg / dl.

Study design.

- From April 1 to September 15, 2011, hospital pharmacists reviewed all the prescriptions containing amoxicillin-clavulanate, levofloxacin, vancomycin, gentamycin, tobramycin and amikacin.
- Glomerular filtration rate (GFR) was estimated for patients with serum creatinine greater than 1.2 mg / dL, using the MDRD-4 formula (Modification of Diet in Renal Disease).
- The Pharmacy Department conducted dose adjustment if the glomerular filtration rate was less than 60 ml/min.
- Surgical day hospital patients were excluded because of the short length of stay.

Results

- ✓ During the study, Pharmacy Department looked through 1939 creatinine values.
- ✓ Antibiotic dose adjustment was required in 47 cases (2.4%).
- ✓ The number and percentage of patients with each one of the antibiotics evaluated was:
 - ✓ amoxicillin-clavulanate 738 patients (38.1%),
 - ✓ levofloxacin 507 patients (26.1%),
 - ✓ vancomycin 279 patients (14.4%),
 - ✓ gentamycin 248 patients (12.8%),
 - ✓ tobramycin 140 patients (7.2%)
 - ✓ amikacin 27 patients (1.4%).
- ✓ The mean glomerular filtration rate observed was 32.3 ml/min.
- ✓ All the pharmacists recommendations were accepted.

Conclusions

- ✓ Pharmaceutical intervention had improved antibiotic pharmacotherapy of patients with acute renal failure.