

IMPLEMENTATION OF THERAPEUTIC DRUG MONITORING ACTIVE PROPOSAL IN THE HOSPITALISED PATIENT

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What was done?

The pharmacist encouraged therapeutic drug monitoring of susceptible treatments by an active proposal for drug level determination in the prescriptions program.

Why was it done?

Therapeutic drug monitoring (TDM) allows an optimized pharmacological treatment and increases safety. Lately, we detected low interest in TDM which was confirmed from our annual activity report.

Observational prospective study

Second level hospital
(175 930 patients)

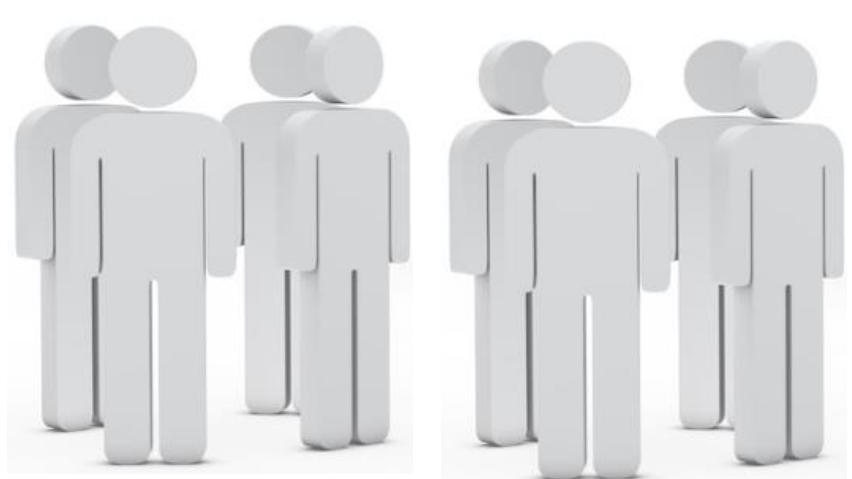
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Objective: To improve treatment individualization of inpatients through an active proposal for drug level determination of drug susceptible for TDM at our institution

- Digoxin
- Vancomycin
- Carbamazepine
- Phenytoin
- Phenobarbital
- Valproic acid

How was it done?

List of eligible patients
(daily; filtering software)



Data sources:

- ✓ Electronic prescription program
- ✓ Pharmacokinetic validation program
- ✓ Electronic medical record

Demographics, clinical and analytical variables
(creatinine clearance, the last TDM result, diagnosis)

Active prescriptions
(treatment initiation, interactions)

Pharmacist makes a recommendation for plasma drug level determination.



What has been achieved?

107 patients

45,8% women

Acceptance rate: 87,5%

Proposals of TDM (n=119)

Digoxin	n= 79
Vancomycin	n= 31
Valproic acid	n=4
Carbamazepine	n=3
Phenytoin	n=2

Drugs discontinued before possible sample extraction → 74

Monitorizations not performed due to patient death → 5

35/40 monitoring requests

Low levels or at a lower limit

n= 17
(n=8 → increased dose and verification of levels)

Levels in range

n=13

High levels or at an upper limit

n=4
(n=3 → dose reduction)

One sample was extracted after vancomycin administration therefore without value

What next?

Pharmacist can contribute to treatments optimization by being proactive.
Many resources are not needed unless the burden of care was a limiting factor.
The education and promotion of TDM would be interesting to improve the use of this service.

