

Assessment of pharmaceutical interventions in a clinical pharmacokinetics unit

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OBJECTIVE

To classify pharmaceutical interventions made by a pharmacy resident in the pharmacokinetics unit of a tertiary hospital and evaluation of acceptance by the clinician.

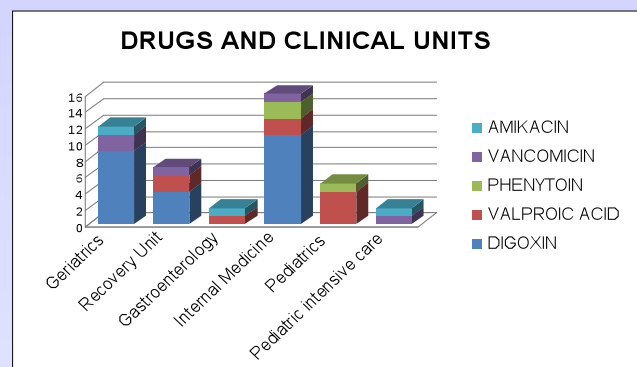
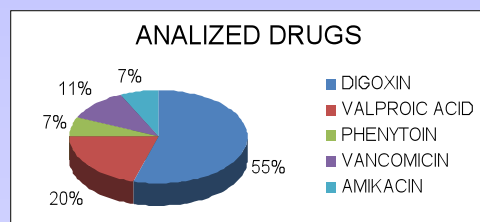
METHODS

For one month, we reviewed electronic prescriptions of drugs with a narrow therapeutic range in medical and intensive care departments. Pharmacokinetics study was performed using the PKS® software package and a report was issued to the patient's physician.

Pharmaceutical interventions were classified according to the method described by Overhage et al, which measures the severity of medication errors and the value of clinical interventions made by the pharmacist. Drug-related problems were classified according to the Granada Consensus.

RESULTS

Thirty-two patients (84% of those reviewed) were analyzed. We made 29 pharmaceutical interventions (the remaining patients had drug levels within the therapeutic range), with a degree of acceptance of 93%. The classification of interventions according to clinical importance was life-threatening (34%), serious (14%), and significant (52%).



| INTERVENTIONS | Cuantification |
|--|----------------|
| Dosing error consisting of a very low dose of a drug that is not potentially life-saving | 10 |
| Dosing error consisting of a very low dose of a potentially life-saving drug | 10 |
| Dosing error resulting in potentially toxic concentrations | 3 |
| Inappropriate dosing interval | 3 |
| Clinically significant interaction requiring follow-up | 2 |
| Adverse events related to precautions or contraindications | 1 |

| DRUG RELATED PROBLEMS | Cuantification |
|----------------------------------|----------------|
| Quantitative Ineffectiveness | 20 |
| Non-quantitative Ineffectiveness | 2 |
| Quantitative Unsafety | 4 |
| Non-quantitative Unsafety | 3 |

CONCLUSIONS

Most of the patients required a pharmaceutical intervention to adjust their treatment. All interventions made had a relevant clinical impact, as they involved high-risk drugs with a narrow therapeutic range that were widely prescribed by medical staff at the hospital. The most common drug-related problem was quantitative ineffectiveness due to underdosing.