

Analysis of pharmaceutical interventions carried out via electronic prescriptions

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BACKGROUND

Hospital pharmacists play an important role in pharmacotherapy. Pharmaceutical care contributes to securing efficacy and safety in the use of medicines. Validation of the prescriptions allows pharmacists to detect, prevent and solve medicines-related problems. Our objective is to collect and assess the clinical interventions made by a pharmacist in a general public hospital with 120 beds.

MATERIAL AND METHODS

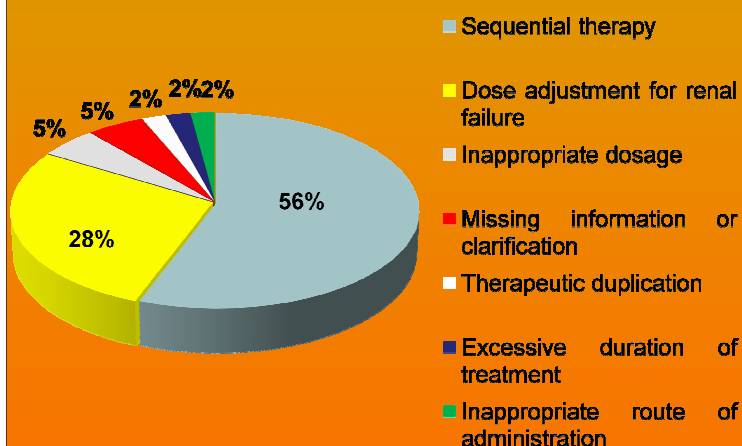
Prospective, observational study of hospitalised patients for two months. Everyday (from July to August 2011) a pharmacist checked the prescriptions electronically. Prescribers were informed of drug-related problems by the electronic prescribing program. Variables collected were: prescriptions written, reason for intervention, the drug involved, acceptance of the intervention by the physicians and response time.

RESULTS

140 interventions were recorded. Patients were mainly admitted to Internal Medicine (57.9%).

38.6% of interventions resulted in a change to patients' pharmacotherapy. Mean response time was 1.1 (SD: 0.9) days. In the majority of non-accepted interventions, the patient's oral tolerability worsened or his/her renal function improved, so no change was required.

SORT OF INTERVENTIONS



Drugs most involved were paracetamol: 47.1% (especially in "sequential therapy") and antibiotics: 15.0% (especially in "dose adjustment for renal failure").

Potential toxicity was avoided by reducing doses of drugs in 17 patients.

CONCLUSIONS

- ✓ The most common intervention was to promote the oral route. This route is safer and less costly than the intravenous route.
- ✓ Patients with renal failure deserved special attention in pharmaceutical validation to avoid toxicity, as the doses of several drugs needed to be adjusted, especially antibiotics.
- ✓ The drug charts review identified real and potential medication errors.