Electronic prescribing systems in outpatient care. Source of information or source of errors? PS-028

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Purpose and objetives

In daily clinical practice systematic errors are observed in the pharmacoterapeutic information from the electronic prescribing systems, even in narrow therapeutic index drugs,. This errors could reach the patient,especially in transitions. Our objetives are:

- To quantify the frequency of errors that occur in narrow therapeutic index drugs monitored in the service of pharmacokinetics.
- To assess whether these errors influence in plasma drug concentration (Cp).
- Determine whether a follow-up queries against hospital or outpatient care reduces errors

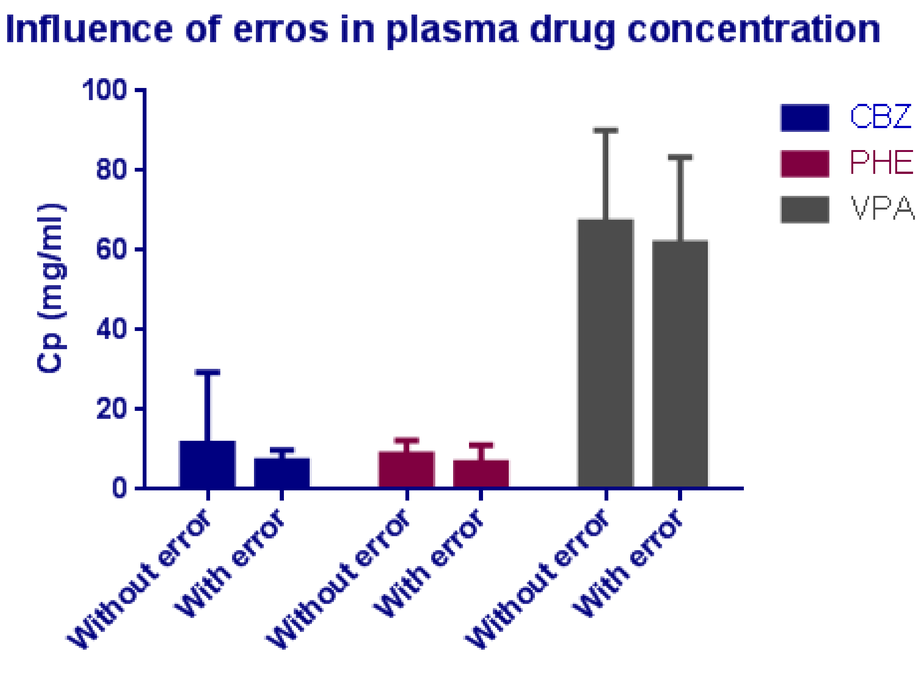
Methods

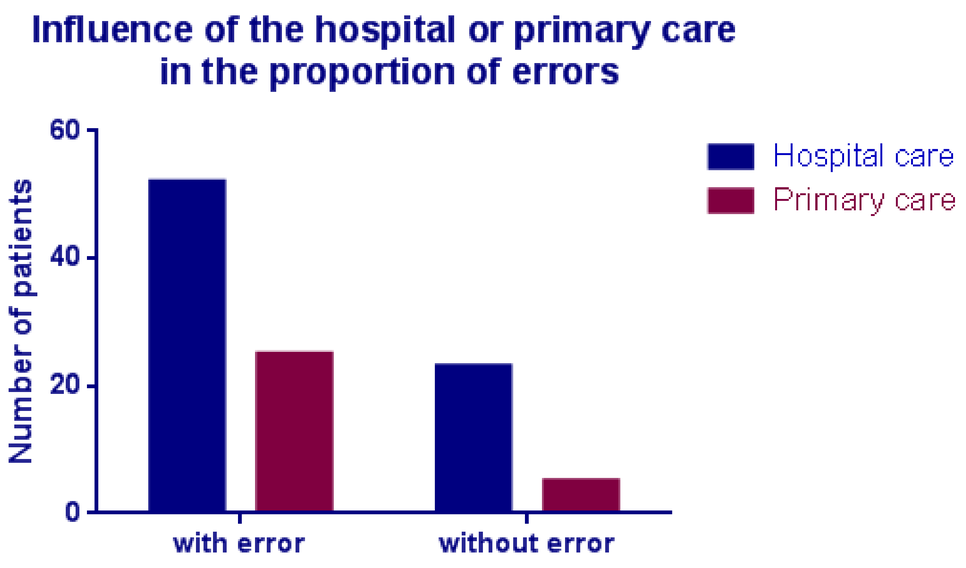
- Prospective observational study
- Period: five months (January-May 2014).
- Population: All patients monitored carbamazepine(CBZ), phenytoin(PHE) and valproic acid (VPA).
- Sources of information: pharmacotherapeutic electronic information/prescription (IANUS®), pharmacokinetic history (Openlab®).
- Determination of Cp: Architect®
- Statistics : Stata 12 ®. Student t (means). Chi-square (propotions).

Results

Number of patients by drug	
Carbamazepine (CBZ)	34
Phenytoin (PHE)	27
Valproic acid (VPA)	41
Total	**103**

Population caracteristics (mean±SD)	
Age(years)	45,8±24,5
Hospital follow up (%)	70,59±46,79
Patiens with error in the pharmacoterapeutic information (%)	30,1±46,1





Conclusions

- We show that the pharmacoterapuetic information from electronic prescribing sistems the is unreliable as it has a very high amount of errors (30.1%).
- The hospital follow-up was not related to fewer errors tan outpatient care.
- These errors were not associated with a different Cp. This may be related to the narrow therapeutic index of these drugs and the small sample size of the study.
- Future studies should assess the frequency of adverse effects with higher number of patients.
- Pharmacist should review this information to communicate and correct errors and to prevent them from reaching patients in care transitions.

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