



Drug-drug interactions among patients with chronic liver disease: A snapshot by clinical pharmacist

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Background

People with chronic liver diseases constitute a group of patients who often join polypharmacy, co-morbidity and pharmacokinetic and pharmacodynamic changes, that cause an increased risk of drug-drug interactions (DDIs).

Objectives

To identify and describe DDIs based on their clinical significance and predictors of their occurrence, among patients with chronic liver diseases. To compare the results from two available electronic sources for interaction evaluation.

Materials and Methods

A study was conducted on a hepatology ward from May to July 2015, at the Gastroenterology and Hepatology Clinic. Data were gathered through a prospective chart review performed by clinical pharmacist during a 4-hour visit once per week. Two separate drug interaction programs (*Lexi-Interact* and *Epocrates*) were applied to provide analysis.

Results

Predictors of DDIs

- Total number of drugs per patient
- Number of comorbidities
- Gender

Table 1: Covariates that correlated with the occurrence of DDIs

Covariates	p value
Total number of drugs per patient	0.049
Number of comorbidities	0.023
Patient age	0.039

Acetylsalicylic acid had the highest risk of causing potentially serious (class D) interactions (25.3%).

Results cont.

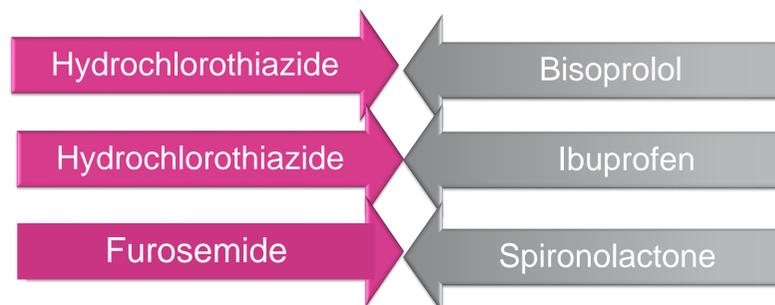


Figure 1: Most common interacting drug pairs

From medicines use review of 100 patients with chronic liver diseases we identified:

- 486 DDIs using *Lexi-Interact*
- 293 using *Epocrates* data base

The most common type of interaction

- class C and monitor/modify
 - 367 DDIs
 - at least one was found in 83.5% of patients

Conclusions

Most DDIs in the study identified the need for monitoring/modifying therapy. Patients on hydrochlorothiazide, furosemide and bisoprolol were more likely to have DDIs. *Lexi-Interact* was shown to be more sensitive source. We advocate that on-ward participation of a clinical pharmacist in a Hepatology team may prevent/minimize the frequency and severity of DDIs, provide prompt solutions and enhance patient care.

References

1. Lexi-Interact. Retrieved from: <http://interact.datastatus.rs/index.php>
2. Interaction Check. In Epocrates Essentials for Apple iOS ([Mobile application software]. Retrieved from: <http://www.epocrates.com/mobile/iphone/essentials>