DDI-PREDICTOR : A NOVEL CLINICAL PHARMACY DECISION-MAKING TOOL FOR DOSE ADAPTATION ?

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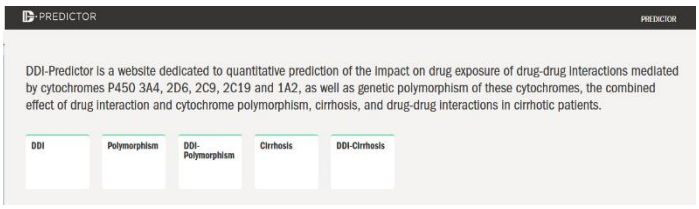
Introduction

To date, pharmacists have been limited to advising dose adaptation to physicians in the case drug-drug interactions (DDI), cirrhosis or presence of genetic polymorphism on P450 cytochromes (CYP). "DDI-Predictor" (DDI-P) is a free online application which may help in such cases.

Study aim: To describe "DDI-P" use as clinical pharmacy decision-making tool.

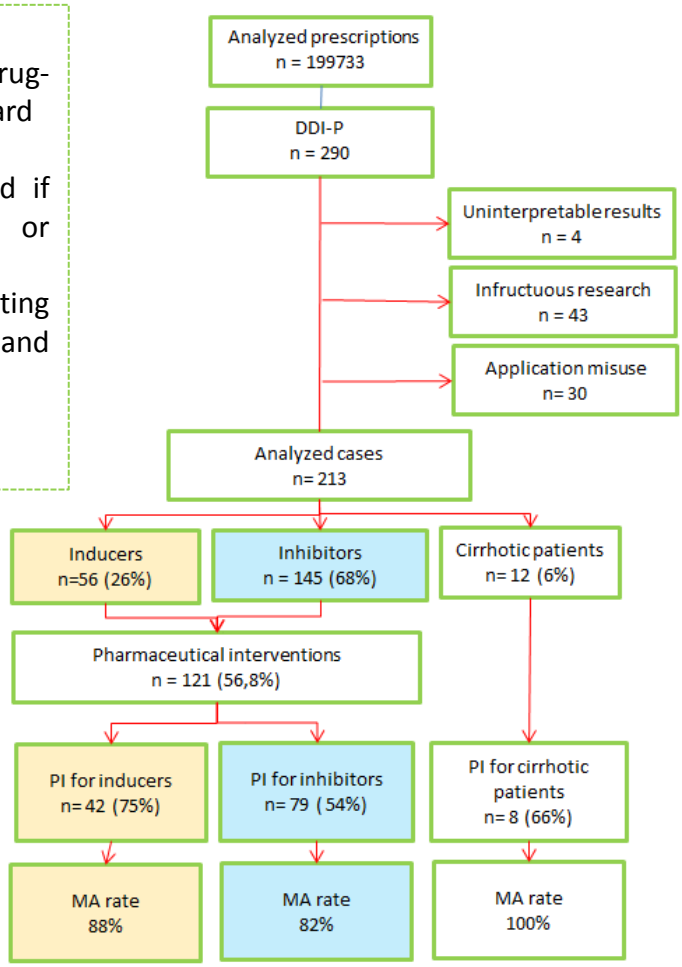
https://www.ddi-predictor.org/



Method

- Training to use DDI-P for 18 clinical pharmacists
- "DDI-P" computed a ratio of area under the drug-concentration curves (R_{AUC}) by comparison to a standard
  R_{AUC} ➡ Calcul of dose adaptation
- Pharmaceutical interventions (PI) were performed if 0.5≤RAUC (induction) or RAUC≥1.5 (inhibition or cirrhosis).
- Collected data: Date, drug and posology, interacting drug, cirrhosis grade, module used, R_{AUC} value, PI and medical acceptation (MA) were recorded.
- The endpoints are PI and MA rates
- Data were analysed by one referent pharmacist.

Results/Discussion



PI for **inducers with 0.5≤R_{AUC}** consisted of
- drug switch 33% (14/42) : for example rivaroxaban to warfarin
- interactor stop 6% (3/42)

PI for **inhibitors with R_{AUC}≥1.5** consisted of
- dose lowering 21,5% (17/79)
- drug switch 8,8% (7/79) : for example mirtazapine to paroxetine

Conclusion

- This **first study** assessing "DDI-P" shows how it **may help clinical pharmacists** in their daily practice.
- **R_{AUC} value** leads pharmacists to assess the **importance of DDI** and **to propose therapeutic adjustments** to physicians, contributing to **therapeutic decision.**
- Although it is **easy to use**, pharmacists must therefore be **trained to interpret** the result in the clinical context at the time of the analysis to avoid potential misuses.