

Abstract

Drug interactions of drugs used in thyroid diseases

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Introduction and objectives: Drug interactions are considered to be a significant aspect of pharmacotherapy that can lead to the potentiation of toxicity and side effects of drugs. However, their identification and adequate management of the use of drug combinations hampers a number of obstacles. The aim of this thesis was to summary information about the drug interactions of drugs used in thyroid diseases (levothyroxine, propylthiouracil, thiamazole) and to formulate articles describing the management of interactions in a clinical practice including information for the dispensation of these drugs. To compare the information presented in each database and to determine the degree of conformity between these sources.

Methodology: Based on the use of numerous information sources (Micromedex, UpToDate, SPC, Stockley's Drug Interactions) lists of drug interactions of drugs used in thyroid diseases were established. Information about these interactions were completed by findings from other sources (PubMed®, scientific reports, Google Scholar). The information presented in each of these databases were subsequently evaluated and compared. The summary of these information lead to create the articles evaluating each individual interaction in a given structure: risk, description, commentary, management, dispensation. The observed differences in the evaluation of possible risk and the clinical relevance of interactions were compared using descriptive statistics methods.

Results: In the practical part of this thesis, 67 drug interactions of drugs used in thyroid diseases were identified. Information about these interactions has been assessed and compared in multiple information sources and subsequently processed into the articles of a given structure. Comparing information listed in these sources, a number of significant differences in the rating of drug interaction potency and management of interactions were detected. For levothyroxine, for example, databases Micromedex and UpToDate differed in the severity rating of 6 interactions, 13 interactions were described only in one of these sources.

Conclusion: According to the findings of considerable differences in the evaluation of interactions between databases, it is important to use and compare information from numerous sources in the management of interaction in the clinical practice. Due to the importance of drug interaction potency in the treatment of thyroid diseases, an active approach of pharmacist and an adequate management of interactions during dispensation of drugs is necessary.

Keywords: drug interactions, thyroid diseases, levothyroxine, pharmaceutical care.