

Abstract

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Pharmacology and Toxicology

Candidate: Tereza Klapková

Supervisor: Assoc. Prof. PharmDr. František Trejtnar, CSc.

Title of diploma thesis: Recent knowledge on drug effect on male fertility

Among the various types of side effects presented in clinically used drugs, negative effects on male reproductive functions can be found. This issue seems to be important and current especially due to the general trend of the decrease in fertility in men and the increasing drug use in younger age groups. The aim of this diploma thesis was to create an overview summarizing current expert knowledge on the effect of drugs on male fertility. For this purpose, we selected relevant publications in the PubMed database, performed their analysis and created the text of the thesis. The review focuses mainly on groups of drugs that are often clinically used and discussed in relation to male fertility, such as drugs acting on the cardiovascular system, antimicrobial drugs, drugs used in pain therapy, antidepressants, antiepileptics, antipsychotics, immunosuppressants and some other drugs. In addition to standard drugs, the review also includes several important natural substances, which are used as adjunctive therapy of various diseases or are important from a toxicological point of view. For each group of drugs, data on the possible effect of their administration on the hypothalamic-pituitary-gonadal axis and prolactin levels (pretesticular effects), effects on sperm production (testicular effects) and on ejaculatory and sperm function (post-testicular effects) are summarized. The created review can serve as an information base for the general professional public in an area that has not yet been sufficiently comprehensively processed.