

**THE STUDY OF DRUG UTILIZATION IN PREGNANCY AT OUTPATIENT
DEPARTMENT OF HOSPITAL TENGKU AMPUAN RAHIMAH; A CROSS
SECTIONAL STUDY**

NOORAZLINDA BT ABDUL RAHIM

Dissertation submitted in partial fulfillment of the requirements for the degree of

Bachelor in Pharmacy

Faculty of Pharmacy

ABSTRACT

Background: Drug utilisation in pregnant women was not widely studied in clinical studies. Thus it is very important to do a drug utilization review in this population. This study aims to evaluate the drug utilization in pregnancy based on class of drug and based on FDA pregnancy risk category.

Methodology: This is a cross-sectional study based on prescription. 9927 prescription was collected from outpatient department of HTAR and was used in gathering the data.

Result: The most commonly prescribed drugs other than supplement were antidiabetics 19.8%, followed by antibiotics 14.8% then analgesics and antihistamine 12.3% respectively. Out of 162 patients in total, 33 women (20.4%) received a drug from category A, 97 (60.5%) received the drug from category B, 39 (24.7%) received the drug from category C, 6 (3.7%) received the drug from category D and no patient received the drug from category X.

Conclusion: The results of drug use in pregnancy are in line with the rational use of drug since there is no drug category X being prescribed in pregnancy. While drugs category C and D can be used when benefits outweigh potential harmful effects.

Keywords: Drug use; Pregnancy; Risk classification

ACKNOWLEDMENTS

In the name of Allah, The Most Beneficent, The Most Merciful, praise and salutation to Prophet Muhammad PBUH. All praises to Allah the Almighty for granting me the health and strength in completing this dissertation.

First and foremost, my utmost gratitude to my supervisor, Professor Dr. Yahaya Hassan for his guidance, unfailing support, patience and steadfast encouragement to complete this study.

My appreciation also goes for Puan Aziah, the Head of Outpatient Department of Hospital Tengku Ampuan Rahimah, Klang Selangor. Special thanks to my family for all the support, love and encouragement in fulfilling my dream. Last but not least, thank you to all my friends for your help and I am grateful that everyone around were very helpful in completing this dissertation. God bless.

TABLE OF CONTENT

APPROVAL SHEET	i
AUTHOR'S DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGMENTS	iv
LIST OF TABLE	vii
LIST OF FIGURE	viii
LIST OF ABBREVIATIONS.....	ix
CHAPTER 1 INTRODUCTION	1
1.1 Background	1
1.2 Problem statement.....	3
1.3 Research question.....	3
1.4 Objective	3
1.5 Hypothesis.....	4
1.6 Significance of study	4
CHAPTER 2 LITERATURE REVIEW	5
2.1 Pregnancy	5
2.1.1 Definition of pregnancy.....	5
2.1.2 Stages of pregnancy.....	6
2.2 Pregnancy and drug utilization.....	8
2.2.1 Effect of drug use in pregnancy.....	8
2.2.2 Guideline for prescribing drug in pregnancy.....	11
2.2.3 Maternal characteristics and drug utilization.....	13
2.3 Factor that affect physician's behaviour in prescribing drug in pregnancy.	16
2.3.1 Physician characteristics.....	16
2.3.2 Others	17
2.4 Strategies to promote behavioural change among physicians.....	18
2.5 Issues on drug treatment in pregnancy	20

CHAPTER 1 INTRODUCTION

1.1 Background

Totally, there were 64.1% of the pregnant women took at least one medication during pregnancy, which is 36.2% during the first trimester and 14.2% during the month before pregnancy (De Vigan et al, 1999). In another studies showed that out of 41293 women, 96.4% of them took at least one drug during pregnancy(Egen-Lappe & Hasford, 2004). International studies regarding the drug utilisation in pregnancy showed that majority of the women used drug during pregnancy.

During pregnancy, any foods or medications that the mother takes mostly will be transferred to the fetus as well. The nutrients, some drugs, and oxygen will be transported from the mother's blood into the fetus via placenta(Tortora & Derrickson, 2011).

The transportation of substances from the mother to fetus and from fetus to the mother via placenta is developed at about the 5th week of pregnancy(Briggs, Freeman, & Yaffe, 2005). Since placenta cannot act as an absolute barrier between mother's and fetal's blood circulation, any drugs and chemicals are supposed to be considered as potentially harmful to the fetus when given to the pregnant women (Tortora & Derrickson, 2011).

How drugs caused teratogenic effects are poorly understood. But drugs may have indirect effects upon the fetus by affecting the maternal receptor. They are also