

An Epidemiological Study on Drug Use in Pregnancy

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Abstract

Exposure of pregnant women to drugs is common. Studies done in past have shown that drug use during pregnancy is increasing. It has been estimated that over 90% of women take three or four medicine at some stage of pregnancy. Our objectives are, to analyze the risk category of drugs used during pregnancy and to identify the rational use of drugs among local population. This observational study was conducted in 500 bedded Private Multispeciality hospitals, Kanchipuram. Pregnant women with or without chronic disease are included in this study but the woman who has terminated her pregnancy were excluded from the study. The drugs were classified according to the Australian categorization and the collected data's were thoroughly analyzed. During first trimester 284 patients received category A drugs, followed by 182 patients received category D drugs. During second trimester 340 patients received category A drugs and 96 patients received category D drugs. During third trimester 207 patients received category A drugs, then 34 patients received category C drugs. From our study, it was concluded that there was not even a single prescription having of category X drugs. Pharmacists can play a great role in health education by providing information to the health care professionals about the risk category of drugs used in pregnancy.

Key Words

Epidemiological Study, Pregnancy.

Introduction

Exposure of pregnant women to drugs is common. Studies done in past have shown that drug use during pregnancy is increasing.¹ It has been estimated that over 90% of women take three or four medicine at some stage of pregnancy.² Knowledge of the harmful effects of drugs on the fetus elucidated by the thalidomide disaster was followed by a reduction of the drug use by pregnant women. Concern about the safety of foreign compounds administered to pregnant women has increased the evidence of the fact that drugs administered during pregnancy can affect the fetus due to increased drug consumption. However, several surveys performed in North America and Europe published in the 1990s has found that drug use during pregnancy is still a frequent event, regardless of the country involved.³ At least, 35% of pregnant women have taken medications during their first trimester.⁴

The use of drug during pregnancy is a question of fine balance; no harm should be allowed to the baby due to any drug, and no harm should be allowed to the mother or baby due to a disease is being inadequately treated.

Methodology

This observational study was conducted in 500 bedded Private Multispeciality hospitals, Kanchipuram. Pregnant women with or without chronic disease are included in this study but the woman who has terminated her pregnancy were excluded from the study. A separate data sheet for incorporating patient details was designed to select the appropriate patient. The datasheet has three parts: An identification sheet, Information on disorder, a survey pattern of utilization of prescribing drugs in women during pregnancy. The study obeyed the ethical standards set by the service and the patients who participated after signing an informed consent. The prescribed drugs were categorized by using the Australian categorization⁵ and the collected data's were thoroughly analyzed.

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Result and Discussion

A total of 350 cases were enrolled in the study and only 162 patients were followed up and the remaining could not be followed up. Out of 350 cases, 51.42% (n =180) were in the range of age between 21-25 years, 33.42 % (n =117) were in the range of age between 26-30 years, 10 % (n =35) were in the range of age between >30years, 5.1 % (n =18) were at the age of less than 20 years. During first trimester 284 patients received category A drugs, 24 patients received category B1 drugs, 26 patients received category B2 drugs, 6 patients received category B3 drugs, 33 patients received category C drugs, 182 patients received category D drugs. Fig.1. During second trimester 340 patients received category A drugs, 12 patients received category B1 drugs, 17 patients received category B2 drugs, 2 patients received category B3 drugs, 63 patients received category C drugs, 96 patients received category D drugs. Fig.1. During third

trimester 207 patients received category A drugs, 9 patients received category B1 drugs, 4 patients received category B2 drugs, 5 patients received category B3 drugs, 34 patients received category C drugs, 20 patients received category D drugs. Fig.1. During first trimester maximum of A category drugs are prescribed followed by category D was prescribed. In second trimester same as first trimester A and D drugs was maximum prescribed but in case of third trimester category A and C drugs are prescribed. Maximum 41 % drugs were prescribed in first trimester then second trimester (39 %) and third trimesters (20 %) were prescribed Fig.2. Engeland, *et, al.*, (2008) stated that, During pregnancy, 57% were prescribed drugs. In the first trimester, 33% of mothers were dispensed drugs, while the figure was 29% for mothers in the last trimester.⁶

Table: 1 Drugs prescribed in Different Trimester

Trimester	Category of drugs					
	A	B1	B2	B3	C	D
1	284	24	26	6	33	182
2	340	12	17	2	63	96
3	207	9	4	5	34	20

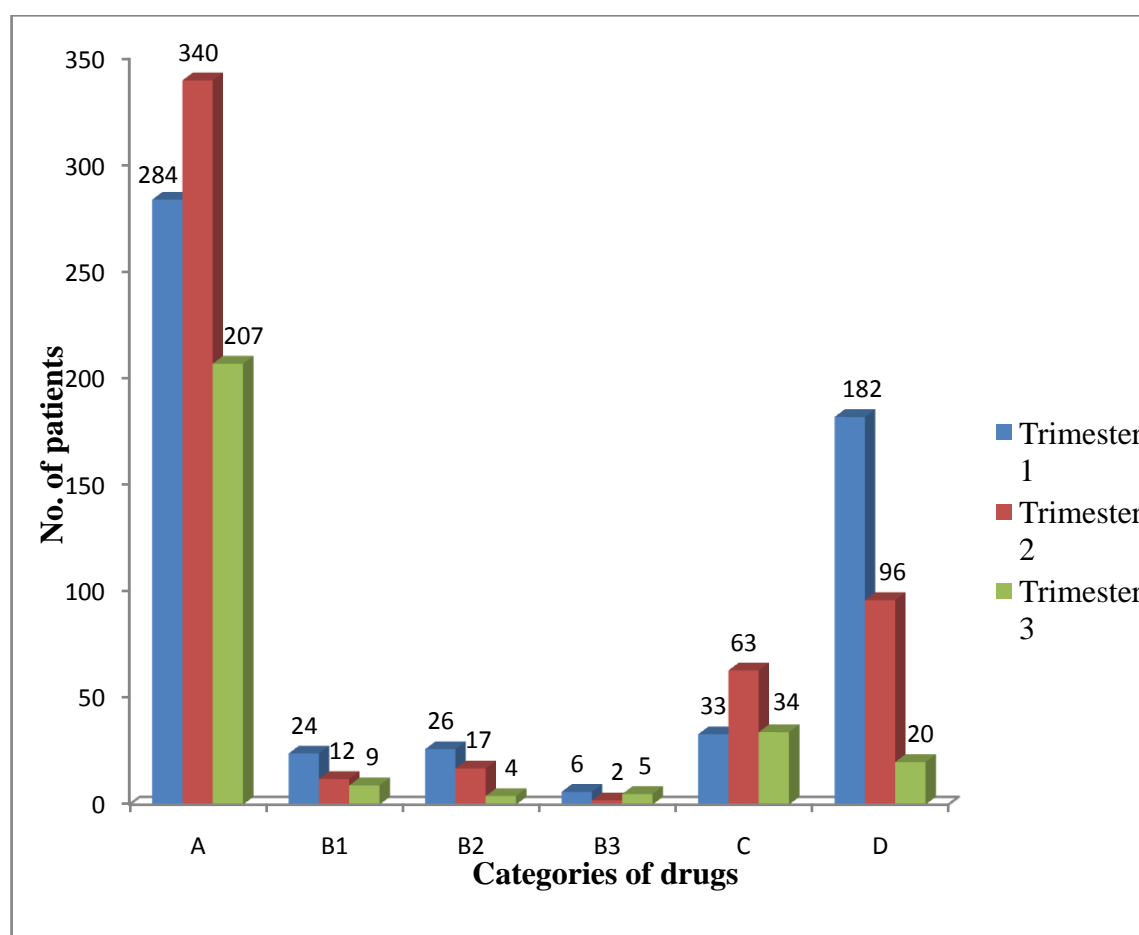


Fig:1: Categories of drugs prescribed in different Trimesters

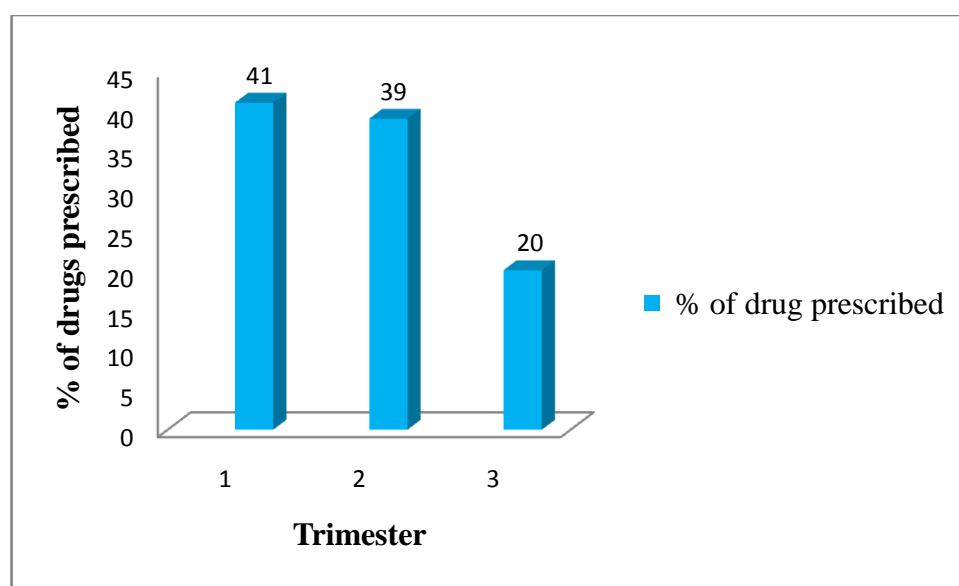


Fig: 2: Percentage of drugs prescribed in different Trimesters

Conclusion

Our study supports the concept of rational drug use during pregnancy. We found that the exposure to drug use during pregnancy can be reduced except for the chronic disease which have to be continued even during pregnancy. However, the prescriptions often containing more than 3 drugs are worrying, as some drugs known to cause some adverse effects. Most of the prescriptions in our study contain the nutritional supplements which continued till their 3rd trimester. From our study, it was concluded that there was not even a single prescription having of category X drugs. Pharmacists can play a great role in health education by providing information to the health care professionals about the risk category of drugs used in pregnancy. In conclusion, it is believed that pharmacist and other health care professional would appreciate the role of pharmacist in pharmacoepidemiological study and educate the patients and attempt to extend their services to pharmacoepidemiological study as one of their services.

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