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A STUDY ON PREVALENCE OF MORBIDITIES AND DRUG PRESCRIBING PATTERN AMONG PREGNANT WOMEN IN A TERTIARY CARE TEACHING HOSPITAL

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ABSTRACT

Pregnancy is special physiological condition where drug treatment presents a special concern: A unique period in a woman's life. Many changes are happening to her body that may affect the pharmacology of medications. Pregnancy is associated with a wide range of pharmacokinetic and physiological changes. Those changes quite often present physiological complications during pregnancy. Apart from this, pregnant women also present with other concurrent medical illness and chronic diseases. The study the prevalence of morbidities and drug prescribing pattern among pregnant women in Gynecology and Obstetrics. The study was a prospective observational study conducted in the Karuna Medical College and Hospital, Chittur, Palakkad in the duration of six months (February 2021 to July 2021). A total of 261 cases were included from Inpatients/Outpatients attending the Gynaecology and Obstetrics Department. Self designed data entry form was used to collect data related to the patient's demographics, medical history, medication history, gravida, trimesters, morbidities present and the medications prescribed. The age wise distribution reveals that 129 (49.42%) patients were of the age group 21-25 which showed that most of the women that came with pregnancy to the hospital were in their 20s. A total 110 patients (42.14%) were having their primi Gravida (G1) and highest number of patients – 91 patients (34.86%) were in their third trimester. Prevalance of morbidities: The most commonly seen morbidities included Vomiting (16.88%), Hypothyroidism (13.63%), Gestational DM (4.54%), Preeclampsia (4.54%), UTI (7.14%), Anaemia (4.54%) and Lower abdominal pain (7.79%). The most commonly prescribed drugs included Folic acid (93.1%), Calcium (90%) and Iron tablets (85.82%). The present study gives collective information of morbidities prevailing during pregnancy, drug usage, evaluating pattern of prescribing drugs which would add to the database about safe medication in pregnancy..

Key words: Morbidities, Prescribing pattern, Trimester, Gravida, Pregnancy.

INTRODUCTION

Pregnancy is a special physiological condition where drug treatment presents a special concern: A unique period in a woman's life. Many changes are happening to her body that may affect the pharmacology of medications. During pregnancy, a woman's gastric pH is increased and gastric motility is reduced, which may interfere with the rate and extend of medication absorption [1].

Medication treatment in pregnancy cannot be totally avoided since some pregnant women may have chronic pathological conditions that require continuous or interrupted treatment Also during pregnancy new medical conditions can develop and old one can worsen (e.g., migraine, headache, hyperacidity) requiring drug therapy [2].

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Information on use of drugs during pregnancy is scarce and rather anecdotal. The rationale for medication used during pregnancy needs to be extra strong. In other words, benefits to the mother and risks to the fetus need to be continuously monitored. Despite the absence of adequate studies on the safety and effectiveness of prescribing drugs for pregnant women, evidence available shows that physicians prescribe and pregnant women take (often self medicated) a surprisingly large number of drugs [3-4].

Prescribing patterns of the drug in the pregnant women are the serious events which can have harmful effects to mother as well as foetus if administered. Thalidomide and isotretinoin are the most notable examples. Prescribing patterns of the drug in the pregnant women includes Age, GTPAL (Gravidity Term Preterm Abortion Living), Co-morbidities, trimester, gravid condition [5].

The pregnancy category of a medication is an assessment of the risk of fetal injury due to the pharmaceuticals, if it is used as directed by the physician to the mother during pregnancy [5].
Complications of pregnancy, childbirth, and the postpartum period may lead to death or cause a continuum of morbidities that affect a woman's health for short or long-term periods during and after pregnancy, and even throughout her life. The common causes of maternal death include hemorrhage, hypertension, infection, obstructed labor and unsafe abortion. Complications can arise any time during pregnancy, child birth and post natal period and in absence of skilled intervention, there is a high fetomaternal morbidity and mortality [3].

Study of drug usage pattern in a South Indian state has been limited. Therefore, the study was conducted to study the prevalence of morbidity and drug prescribing pattern during pregnancy among the antenatal care patients attending to the tertiary care hospital. The present study gives collective information of morbidities prevailing during pregnancy, drug usage, evaluating pattern of prescribing drugs which would add to the database about safe medication in pregnancy.

METHODOLOGY

The study was a prospective observational study and conducted in Karuna Medical College Hospital Chittur, Palakkad. A total of 261 cases were taken from inpatients and outpatients attending the Gynecology and Obstetrics Department in duration of 6 months (February 2021 to July 2021). The aim of the study was to assess the prevalence of morbidities and the prescribing pattern of drugs in pregnancy. The study includes pregnant women above 18 years attending OP & IP Department and the patients with IVF Pregnancy were excluded due to the chances for increased hormonal therapy in the condition. This study was approved by Institutional Ethical Committee of Karuna Medical College. Patient consent form was prepared and written consent was obtained. Self designed data entry form was used to collect data on patient demographics, history of disease & medication, medication from the prescription, morbidities during pregnancy. These were then used to analyze the patient information on for morbidities, prescribed medications, trimesters, gravida. All pregnant women attending to Gynecology department were observed for the morbidity study. All information regarding the present morbidities along with their treatment were analyzed thoroughly. These collected data will be documented in the patient data collection forms provided. They were then analyzed statistically by Microsoft Excel by taking mean and standard deviation and expressed in graphical terms.

RESULTS

The present study was conducted to assess the prevalence of morbidities and to study the drug prescribing pattern among pregnant women. A total of 261 patients who visited inpatient & outpatient Department of Gynecology and Obstetrics were enrolled in this study. In Age wise distribution among the study population, Out of 261 pregnant women, most of the pregnant women were of the age group 21-25 years which was 49.42% (n=129). The mean age was represented as 24.4 ± 4.24. The GTPAL status of the pregnant women in the study revealed that most patients were of G1 with 42.15% (n=110). while 151 patients were of Multi Gravida. In distribution of trimesters in the study population, most patients were of the Third trimester 34.86% (n=91). The prevailing morbidities were categorised into the three trimesters and it was found that in the first trimester vomiting was the morbidity with highest prevalence. Hypothyroidism showed most prevalence in the second trimester, which was found to be a pre existing condition in most these women. In the last trimester, hypothyroidism was still the most prevailing morbidity among the pregnant women under study followed by UTI. The Frequency of most commonly used drugs in this study was analyzed, and the result statistics showed that Folic Acid tablets were the most frequently prescribed drug (243 times) that covers about 93.1% of pregnant women studied. It was followed by Calcium (prescribed 235 times in about 90.04% women) and Iron (prescribed 224 times in about 84.82% women.

According to the Anatomical and Therapeutic Classification (ATC), Anti Anaemic drugs (B03) were the most commonly prescribed category with 467 drugs (38.9%), followed by Analgesics (N02) with 345 drugs (28.9%), and Antihistamines (R06) with 120 drugs (10%). The least prescribed category was anti-asthmatics (R) with 4 drugs (0.3%). The Frequency of most commonly used drugs in this study was analyzed, and the result statistics showed that Folic Acid tablets were the most frequently prescribed drug (243 times) that covers about 93.1% of pregnant women studied. It was followed by Calcium

(prescribed 235 times in about 90.04% women) and Iron (prescribed 224 times in about 84.82% women). Among the injections, Tetanus Diphtheria (inj TD) immunisation was most commonly prescribed, i.e, 80 times in 30.65% of women under study.

TRIMESTER	SN	MORBIDITY	Number of Patients (n=261)	Percentage (%)
1st Trimester (n=86)	1.	Vomiting	18	20.93
	2.	Hypothyroidism	7	8.13
	3.	Gestational DM	5	5.81
2nd Trimester (n=84)	1.	Hypothyroidism	8	9.52
	2.	Preeclampsia, UTI	4	4.76
	3.	Vomiting	4	4.76
		Anaemia	3	3.57
3rd Trimester (n=91)	1.	Hypothyroidism	6	6.59
	2.	UTI	5	5.49
	3.	Lower Abdomen Pain	4	4.39
		Vomiting	4	4.39

Table 1. Morbidity distribution among various pregnancy trimesters in study population
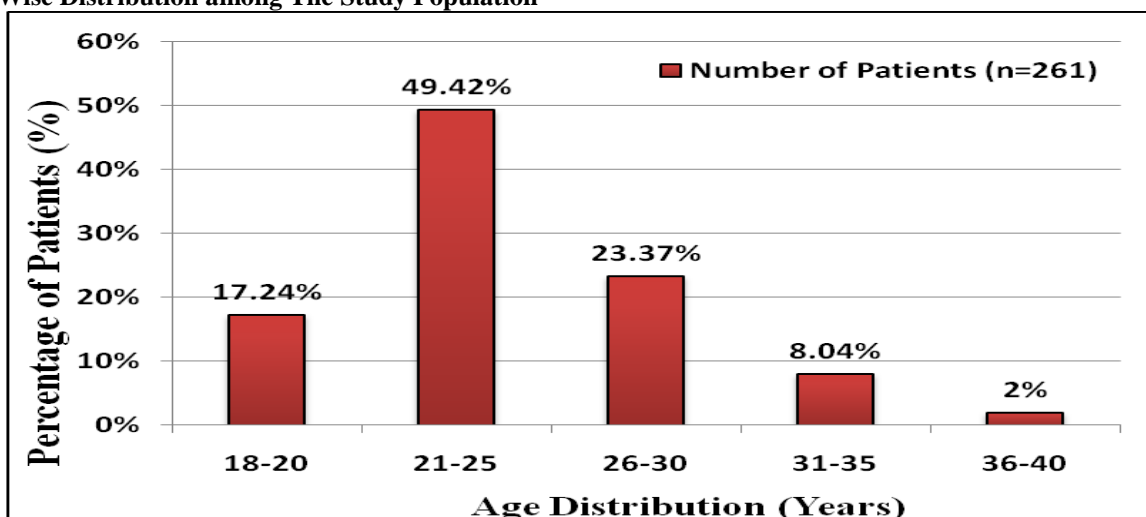
Fig 1. Age Wise Distribution among The Study Population

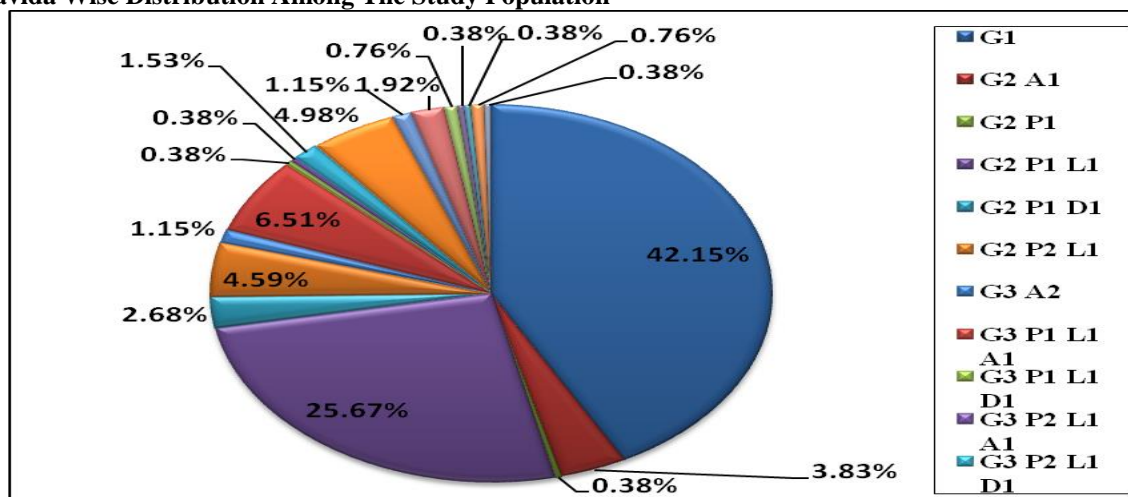**Fig 2. Gravida Wise Distribution Among The Study Population**

Fig 3. ATC wise distribution of drugs prescribed in the study population.
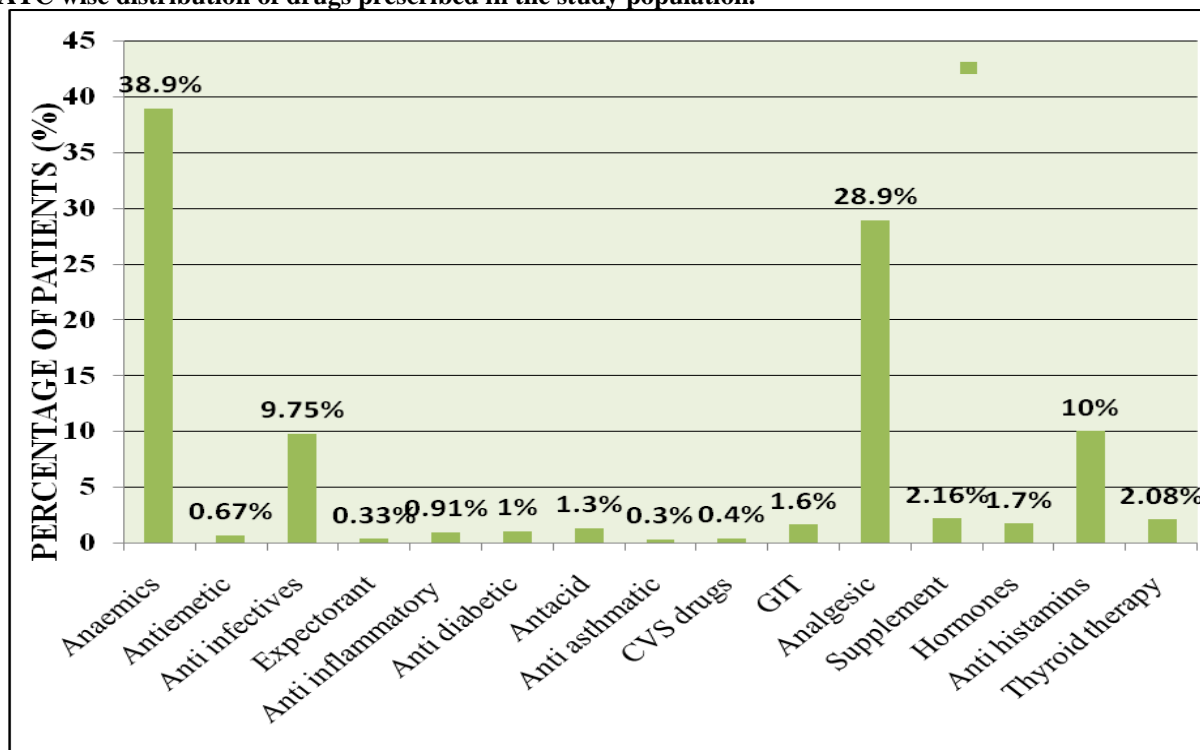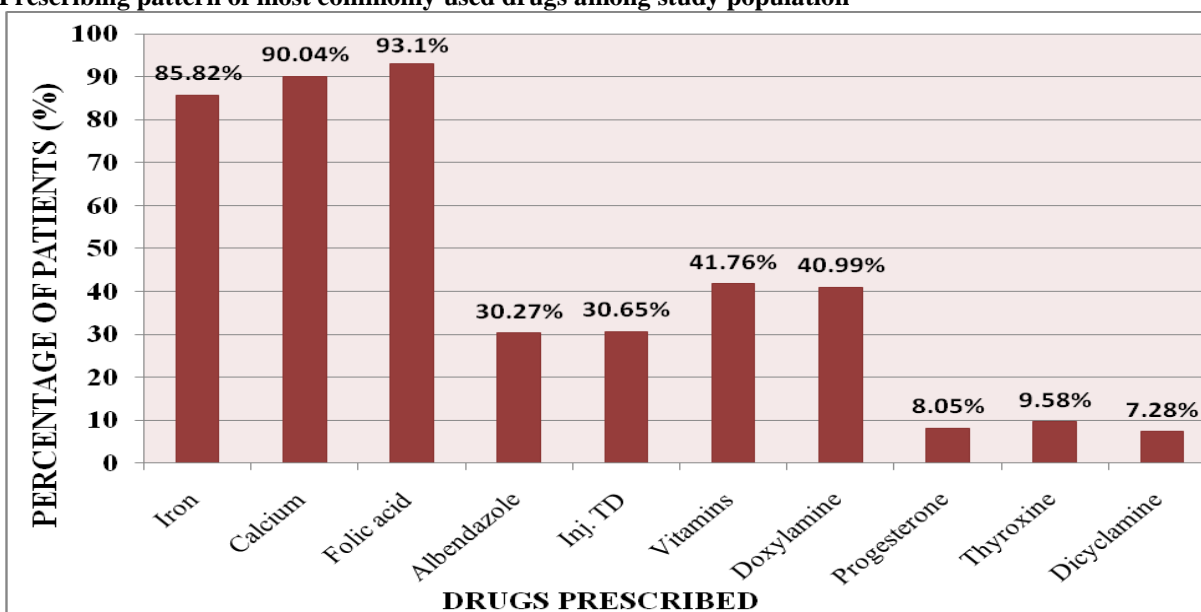

Fig 4. Prescribing pattern of most commonly used drugs among study population

DISCUSSION

Pregnancy is a special physiological condition. Careful consideration of the benefit to the mother and the risk to the foetus is required while prescribing drugs during pregnancy. The teratogenic risk of most drugs is undetermined; hence it is important to monitor drug use regularly among pregnant women. The mean age in the study was represented as 24.4 ± 4.24. It shows that most of the pregnant women were in their 20s during the pregnancy period. Most of the pregnant women that visited the gynecology department of the hospital came with their first pregnancy. The women were found to be visiting the hospital for regular checkups but mostly in their third trimester.

The prevailing morbidities were categorised into the three trimesters and it was found that in the first trimester vomiting was the morbidity with highest prevalence. This is due to the urge of Human Chorionic Gonadotropin (hCG) in the first trimester of pregnancy. Gestational Diabetes Mellitus was only found in 5 women in first trimester. Hypothyroidism showed most prevalence in the second trimester, which was found to be a pre existing condition in most of these women. In the last trimester, hypothyroidism was still the most prevailing morbidity among the pregnant women under study followed by UTI, vomiting and Lower abdominal pain. UTI is caused due to the increased weight of the foetus blocking the drainage of urine from the bladder causing infection whereas Abdominal Pain is caused by the pull of nearby nerve fibers in the abdomen due to the growing uterus [6].

The Frequency of most commonly used drugs in this study was analyzed, and the result statistics showed that Folic Acid tablets were the most frequently prescribed drug, of folic acid and multivitamin supplements are essential during pregnancy as they can prevent or reduce the risk of most of the neural tube defects and other congenital abnormalities including urinary tract abnormalities and cardiovascular malformations including Ventricular Septal defects [7].

CONCLUSION

This study studied a total of 261 pregnant women. It provided an insight on the various pregnancies related and unrelated morbidities that were found in the pregnant women in various trimesters and gave data about the prescribing pattern of drugs during pregnancy in a 500 bedded tertiary care hospital in South India. The most commonly seen morbidities included Vomiting, Hypothyroidism, UTI, Abdominal pain, Gestational DM and Preeclampsia. Most of these morbidities were found to be due to pre existing conditions. Most drugs prescribed during pregnancy were safe as per the US FDA guidelines, which reflect the rational practice in the setting. Although satisfactory results were obtained framing the safety of drug use during pregnancy, it is the most ideal for the clinical pharmacists to have to direct interaction with the physicians with the most updated knowledge about the risks and precautions to work together towards a safer and risk-moderated therapy to absolutely improve the safety and health of the pregnant women and the antinatals.

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