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Prescription Pattern of Drugs in Pregnancy in a Tertiary Care Hospital.

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ABSTRACT

Most of pregnant women take prescription or non-prescription drugs during pregnancy. In general, unless absolutely necessary, drugs should not be used during pregnancy because it can affect the fetus .The aim of this study was to evaluate the patterns of drug prescriptions to pregnant women in tertiary care hospital. It was a cross-sectional descriptive study conducted at MediCiti Institute of Medical Sciences, a tertiary care hospital of Medchal, Hyderabad. Prescriptions given to outpatients and inpatients pregnant women attending the antenatal clinics were collected. A simple questionnaire was used to gather information. The drugs were classified according to the pharmacological class and their teratogenic potential. The most frequently prescribed drugs were oral iron, folic acid preparations, antacids, antibacterials and analgesics. Majority were in accordance with WHO criteria for rational use of drugs except for prescription by generic names. Average number of drugs per encounter was 3.5, most common route of administration was oral. Most commonly used drugs were iron, folic acid. Most common antibiotic prescribed was amoxicillin. Most common condition for which drugs were prescribed was cough, backache and fever. All the prescribed drugs were available in hospital pharmacy in sufficient quantities.

Keywords: Pregnancy, drugs, prescription, rational usage.

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INTRODUCTION

Pregnancy is a physiological condition, utmost care to be taken during drug prescription as physical and mental growth of the fetus is at risk. Rational use of drugs should follow rule of RIGHT (right drug, right patient, right dosage, right cost) and SANE criteria (safety, affordability, need, efficacy). The irrational use of drugs is a major problem of present day medical practice and its consequences include the development of resistance to antibiotics, ineffective treatment, adverse effects and an economic burden on the patient and society. The use of medications in pregnancy is common and based on complex risk-benefit discussions between physicians and patients[1,2]. Unfortunately, there are deficits in the information used in the decision making process. The Centers for Disease Control and Prevention's recommendation states that no clinical studies have been conducted to assess the safety of these medications for pregnant women. The Food and Drug Administration's (FDA) Office of Women's Health (OWH) was created in 1994, after the 1992 Government Accounting Office (GAO) report[3] showed that women were not adequately included in clinical studies. The OPRU (Obstetric-fetal Pharmacology Research Units) network takes a multidisciplinary approach to maternal and fetal therapeutics, pairing clinical and basic science collaborative researchers within the sites and across the networks. *Pregmedic*, a non-profit organization for the advancement of safe and effective use of drugs in pregnancy, has presented a number of proposals and draft guidelines to Health Canada on the inclusion of pregnant women in pharmacokinetic studies and the establishment of registries for women who take drugs during pregnancy[4]. The use of the pregnancy registry design has allowed for the collection and analysis of data on the effects of drug exposure on human pregnancies that have otherwise been difficult to obtain[5].Combination therapy helps in normalization of maternal hemodynamic parameters that single agent therapy is unable to provide. Maternal hemodynamics can be used effectively to direct therapy to achieve these individualized pharmacotherapy goals. The heterogeneity in underlying abnormalities in insulin sensitivity and beta cell responsivity[6] for women with gestational diabetes will likely play a role in individual response to the various hypoglycemic agents. Nausea and vomiting of pregnancy associated with reflux symptoms are treated with either H2 blockers or Proton Pump Inhibitors alleviates the severity[7]. Treating hypertension in pregnancy prevents severe hypertensive crises[8]. The goal of the pharmacokinetic and pharmacodynamic principles in individualized drug therapy for hypertension and preeclampsia is to promote maternal health, prevent preterm birth, and maintain fetal growth. The official recommendation for iodide

substitution, to prevent thyroid diseases in mother and child, was insufficiently implemented.

MATERIALS AND METHODS

This was a cross-sectional, descriptive study conducted over a period of 3months in outpatients and inpatients of obstetrics and gynaecology department at MediCiti Institute of Medical Sciences, a tertiary care hospital of Medchal, Hyderabad. Copies of 246 outpatients' and inpatients' prescriptions given to pregnant patients attending the antenatal clinics were collected and recorded over a specially designed proforma. The data was analyzed to find out the prescribing pattern in the hospital and drugs were classified according to the pharmacological class and their teratogenic potential.

RESULTS AND DISCUSSION

The most frequently prescribed drugs were oral iron, folic acid preparations, antacids, antibacterials and analgesics. Prescribing of Category X drugs (evidence of risk to the fetus; use contraindicated in women who are or may become pregnant) during pregnancy was not seen, prescribing of Category C drugs (insufficient evidence to know whether they are harmful) was common. Average number of drugs per encounter was 3.5, most common route of administration was oral. Injections included 25% (Tramadol most commonly used). Most common antibiotic prescribed was Amoxicillin. Most common antacid prescribed was Ranitidine hydrochloride. Most common antihypertensive prescribed was Methyldopa and Nefidipine. Most common conditions for which drugs were prescribed were cough, backache and fever. Majority of the drugs were not prescribed by the generic names, although the dose and duration of drug usage was clearly mentioned. All the prescribed drugs were available in hospital pharmacy in sufficient quantities.

CONCLUSION

The study was conducted to create awareness about rational use of drugs. Majority were in accordance with WHO criteria for rational use of drugs except for prescription by generic names. Improper prescription practices will not improve without consumer targeted interventions that educate and empower communities regarding the hazards of inappropriate drug use. A combination of non-regulatory and regulatory interventions, directed at providers as well as consumers, would need to be implemented to improve prescription practices of health care providers. Regulation alone would be ineffective unless it is supported by a well-established institutional mechanism which ensures effective implementation[9]. Useful information about the outcomes of exposed pregnancies can be obtained by the careful collection and analysis of post-

marketing surveillance data. Cooperation and collaboration between government agencies, researchers, and people on the front lines of patient care (physicians, nursing staff) will continue to strive to improve the care of pregnant women and their babies. Prescription auditing helps in minimizing overuse and misuse of drugs.

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