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ASSESSMENT OF DRUG RELATED PROBLEMS IN OBSTETRICS AND GYNAECOLOGY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

In current research, assessment of drug related problems (DRPs) in OBG was done. The objective behind the research was to identify the drug related problems like adverse drug reactions (ADRs), drug interactions (DI), over dose (OD), under dose (UD), treatment without indication (TWI), untreated indication (UTI). DRP admissions have been significantly increased over the past few decades. DRP is defined as an event or circumstance that involves a patient's drug treatment that acutually or potentially, interfers with the achievement of an optimal outcome. From current research, 200 cases are collected. Out of 200 patients, 130 patients are identified with atleast one drug related problems.258 DRPs are identified. In that 128 drug interactions,7 treatment without indication, 25 untreated indication, 5 lower dose, 9 under dose, 33 ADRs, 5 drug duplication. Therefore, drug related problems are prevalent in hospital in-patients. Pharmacists can play important role to identify and resolving DRPs. Thus, it can be concluded this study can be beneficial for the assessment of drug related problems in Obstetrics and Gynaecology**.** **Objectives:** To study the drug related problems in OBG patients. **Materials and Methods:** It is a prospective observational study conducted in Basaveshwara Medical College, Hospital and Research Centre for a period of six months. Patients admitted in obstetrics and gynaecology are selected. The data was collected from medical records of the patients and documented in suitable designed form. **Results:** In the present study a total of 1500 drugs were prescribed in 200 patients. Out of 200 patients, 128 patients having DI, 53 are mild, 40 are moderate and 35 are major. 51 patients are over dosed. Hence drug duplication is 5. 9

patients are under dosed. 33 patients are having ADR. Based on Naranjo Scale 8 are unlikely, 10 are possible, 15 are probable.7 patients are having drug use without indication. 25 patients are having untreated indication. **Conclusion**: It has been concluded that the role of a pharmacist in a hospital is a very crucial one**.** Regular monitoring of the prescribed by the physicians will sure support in the reduction of drug related problems.

KEYWORDS: DRP.

1. INTRODUCTION

A drug related problem (DRP) is as an event or circumstance involving drug treatment that actually or potentially, interferes with the patient's experiencing an optimum outcome of medical care. DRPs can originate when prescribing, dispensing or taking/administering medicines. A clinical pharmacists can play a very important role by addressing the whole range of drug therapy in hospitals and in general, the clinical pharmacy services have been reported to improve patient care by reducing inappropriate prescribing, diminish adverse events, reduce length of stay, ADRs and mortality, and give economic benefit. The pharmacists can play a key role in reducing the incidences of DRP by making appropriate intervention at each stage and by working with other healthcare professionals. The use of drugs during pregnancy calls for special attention because in this case in addition to the mother, the health and life of her unborn child is also at stake. The drugs given to pregnant mothers for therapeutic purposes may cause serious structural and functional adverse effects in the developing child.

Patient safety is one of the most important aspects of health care system. Medicines can cure illness and at the same time harm the patient if not appropriately used. Hence every patient must receive the right medication, in the right amount and at the right time. Drug induced morbidity has become a common problem. Adverse reactions to a drug(ADR), allergic reactions, drug not prescribed appropriately, drug prescribed not appropriate for indication, indication for which no drug is prescribed, contraindicated drug prescribed, duplication of drug therapy, administration and storage errors,inappropriate laboratory and non-laboratory monitoring, drug interactions, medical chart errors, patient noncompliance and unawareness about the usage of drugs etc. are some examples of DRPs. Clinical pharmacist can play a key role in promoting better medication use, ensuring that patients receive appropriate pharmacotherapy thus minimizing the risk of unfavourable outcomes of pharmacotherapy.

Therefore by considering the above statements, this study is aimed to assess the drug related problems in obstetrics and gynaecology in a tertiary care hospital.

2. MATERIALS AND METHODS

A prospective observational study was approved by the Institutional Ethics Committee, of SJM College of pharmacy, Chitradurga, karnataka. The study was carried out Patients admitted in obstetrics and gynaecology department in Basaveshwara Medical College & hospital.

- Subjects of all age groups in OBG department.
- Patients include Obstetrics and Gynaecology department.
- Only in-patients are included.
- Willing to sign informed consent form.

Patients with drug related problem presented in-patient department of obstetrics and gynaecology departments are selected for the study. Informed consent form (Annexure-II) is issued and explained to the patient or patient representatives in the local language (kannada). Demographic details of the enrolled patients are collected which are necessary for the study. The details include name, age, sex, medical history, medication history, lab data and treatment chart. Assess the drug related problem of the patient medication chart.

2.1 Statistical Analysis: The data was entered in Microsoft Excel-2010 version and the results are analysed using Statistical Package for Social Services (SPSS 19.0). Chi square test was applied to determine any significant difference between quantitative variable.

3. RESULTS

1. Assessment of Adverse drug reaction based on Naranjo scale (n=200)

Out of 200 patients, based on Naranjo scale 7.5% patients having Probable, 5% patients having Possible, 4% patients having Unlikely. The details are shown in Table NO. 5(a) and graphically illustrated in Figure NO.5(a)

Table 1: Assessment of Adverse drug reaction based on Naranjo scale.

Probability of ADR	Frequency	Percentage (%)
Probable	15	7.5
Possible	10	5
Unlikely	8	4

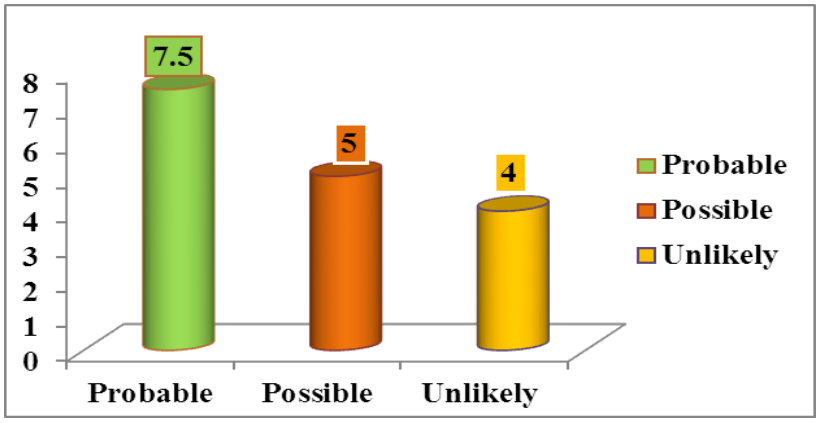

Figure 1: Assessment of Adverse drug reaction based on Naranjo Scale.

2. Drug – Drug interaction

Among 200 patients, 17.5% patients having Major drug-drug interaction, 20% patients having moderate drug-drug interaction, 26.5% patients having minor drug-drug interaction.

Table No.2: Assessment of Drug-Drug interaction.

Severity of interaction	Frequency	Percentage (%)
Major	35	17.5
Moderate	40	20
Minor	53	26.5

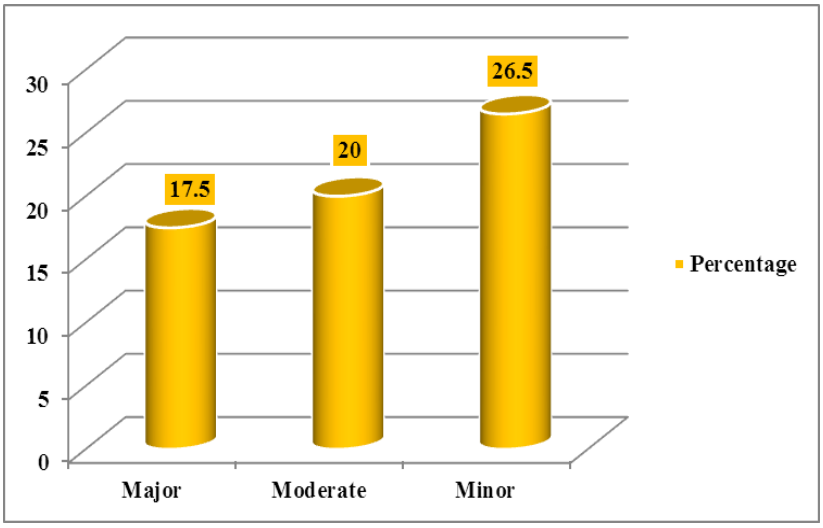

Figure No: 2:-Assessment of Drug-Drug interaction.

DISCUSSION

Drugs play an important role in improving human health and promoting well-being. Drug related problems constitute a major public health problem, because of their consequence on morbidity, mortality and cost. According to the literature they would affect 4% to 22% of

hospitalized patients on a given day. A drug related problem (DRP) is defined as an event or circumstance involving drug therapy that actually or potentially, interferes with desired health outcomes. Problems associated with the drug use have a wide set of factors that can be considered as DRP viz. adverse drug reactions, drug interactions, untreated indication, inappropriate drug selection, sub-therapeutic dosage, supra-therapeutic dosage, non-compliance and drug use without indication. DRP admissions have been significantly increased over the past few decades.

In the present study a total of 1500 drugs were prescribed in 200 patients. The large amount of DRP's identified in the study reflects the choosen definition of DRP's, which includes potential as well as actual DRP's. We would argue that a potential problem should be regarded as a DRP because, if not deal with properly, it will frequently cause negative outcomes. Many studies have shown that a large proportion of DRP's causing hospital admissions are preventable, which emphasizes the need to take potential DRP's into consideration when evaluating drug regimens. The definition of drug-related problems (DRP's) has been widely discussed but, as yet, international agreement has not been achieved.

In this study we have enrolled 200 patients among which DRPs are found more in gynaecology patients and less in obstetrics. A similar study conducted by **Mohammed *et al.*,** (2017) conducted a prospective observational study on assessment of drug-related problems in a tertiary care teaching hospital, India. A total of 300 patient case sheets were reviewed during the study, out of which 143 DRPs were identified from 93 patients. The most common DRP was drug interactions 47.55% (68) followed by drug use problems 19.58% (28),drug choice problems 14.68% (21), others 11.88% (17), dosing problems 4.89% (7), and adverse reaction 1.39% (2) were identified. A similar study conducted by **J Smedberg *et al.*,** (2016) conducted a study on medication use and drug related problems among women at maternity wards-a cross sectional study from two Norwegian hospitals. Out of 212 women were included in the study, of which 89(42%) had experienced at lest one DRP(105 DRPs in total)." Need for additional drug "(49 cases, 46.7%) was the most frequent. The most frequent drug group involved in DRPs was drugs acting on the respiratory system, and the most common intervention was raising awareness/providing confidence/giving information during the patient-reported.

CONCLUSION

According to analyzed results and review of literature, the conclusions made are Drug related problems are prevalent in hospital in-patients.

- Out of 200 samples collected,130 patients are having at least one DRP.
- In 200 patients, 1500 drugs are prescribed
- Out of 200 patients, 128 patients having DI.Out of 128,53 are mild, 40 are moderate and 35 are major.
- 33 patients are having ADR. Based on Naranjo Scale 8 are unlikely, 10 are possible,15 are probable.

By solving or preventing the reason behind the problem the drug related problems (DRP's) or medication related problems (MRP's) will sure face reduction in the hospitals. The role of a pharmacist in a hospital is a very crucial one which depends on the pharmaceutical services provided by them. Regular monitoring of the prescriptions prescribed by the physicians will sure support in the reduction of drug related problems. The study suggests that pharmacists and general practicioners can work together to identify and resolve drug - related problems.

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