

DRUG UTILIZATION PATTERN STUDY IN YOUNG ADULT PATIENTS OF CUTANEOUS ADVERSE DRUG REACTIONS

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ABSTRACT

Objective: To evaluate prevalence of cutaneous adverse reactions in young adult age group using ADR notification form. To create awareness in hospitals and health sectors, to establish drug safety monitoring units for mother and child care.

Methods: Individual case safety reports of 46 patients from various hospitals were analyzed using CDSCO forms. To tabulate data on drugs, doses, systems, ADRs and factors for causation of cutaneous ADRs.

Results: Females are more prone compared to males due to pregnancy at young age with increased use of Iron combinations, antibiotics and antiepileptic's in young adult age groups (20-30yrs) among cutaneous ADRs.

Conclusion: We conclude the need for establishment of drug safety units with generic units for maternity sections and use of drugs in pre and post natal period, as pregnancy and adult age are risk factors for cutaneous adverse drug reactions. Every hospital structure needs special caution on drug lots of iron preparations, antibiotics, analgesics, antiepileptic's to be used in Obstetrics and Gynecology departments.

Keywords: Cutaneous ADRs, Antibiotics, Iron preparations, Drug safety units

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INTRODUCTION

Cutaneous ADRs are predominant with Non-Steroidal Anti-inflammatory drugs, Anti-epileptics and Antimicrobials [1]. Known causative factors include hypersensitivity, polypharmacy and decreases of generic brands [2]. The present study is to create awareness among health care professionals to promote generic drugs and responsible use of drugs towards vulnerable patient's with age group of 20-30 where in pregnancy is very common.

MATERIALS AND METHODS

The present study is carried out taking cutaneous ADRs from various hospitals across Telangana and Andhra Pradesh states. Collection of Individual case safety report forms along analysis of causative factors like, age, gender, drugs, doseregimen and study was carried out for 3 mo on 46 patients of cutaneous Adverse Drug Reactions. Causality assessment done, using WHO-UMC scale and severity assessment done using Hartwig Seigel scale. Data analysed and results tabulated.

RESULTS

Total patients of 46 were include in the study of which 27(58.69%) females and 19 (41.30%) males. The present study shows that Ferric Carboxy Maltose, parental iron preparation and antibiotics like Cephalosporins (ceftriaxone) and Tinidazole used for pregnancy induced anemia. Antibiotics used for pre and post-operative sections and anti-epileptics (Phenytoin) are the

main drugs that contribute to increase incidence of cutaneous ADRs in group 20-30 y [3].

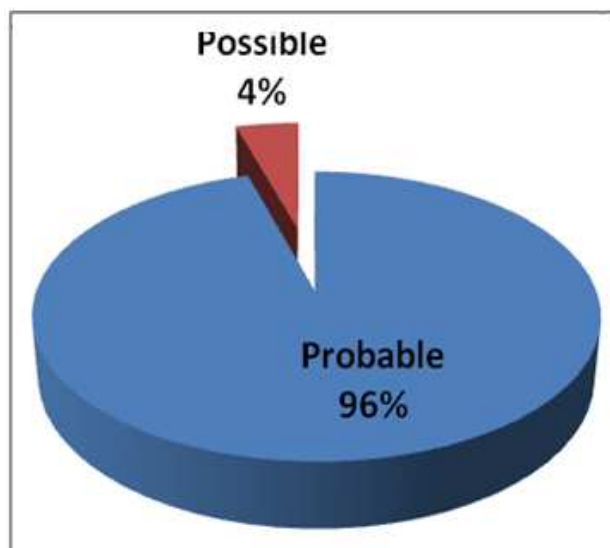


Fig. 1: Percentage distribution of causality assessment

Table 1: Gender wise distribution of patients

Gender	No. of Patients	Percentage (%)
Females	27	58.69
Males	19	41.30

Table 2: Distribution of types of drugs responsible for ADRs

Drugs	No. of patients	Percentage
Iron carboxy maltose(3)+Iron sucrose(6)	9	20
Antibiotics	25	55
NSAIDs	2	4.4
Antiemetics	2	4.4
Multivitamins	4	9
Antiepileptics	3	7
Immunosuppressants	1	2

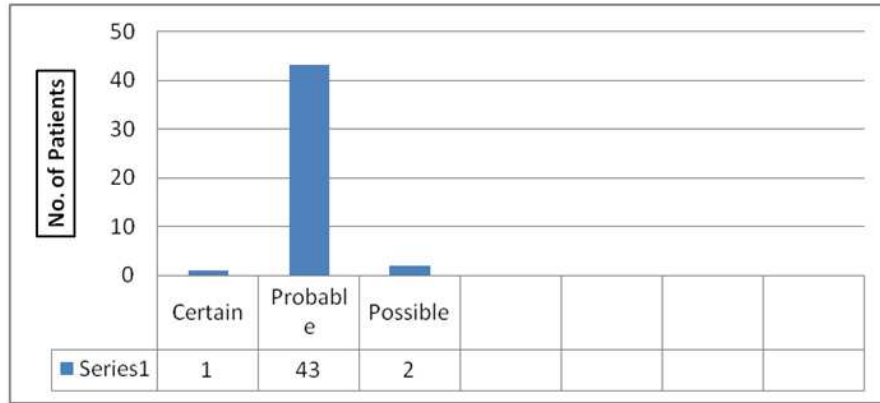


Fig. 2: Distribution of causality assessment of ADRs

Table 3: Usage of brand drug vs generic drugs

Drugs	No. of patients	Percentage (%)
Brand	29	62
Generic	8	17

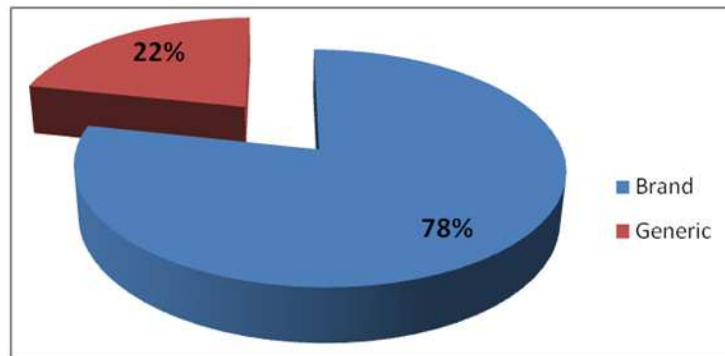


Fig. 3: Usage of brand drug vs generic drugs

Table 4: Causality assessment distribution among patients

Causality assessment	No. of Patients	Percentage (%)
Certain	01	2.17
Probable	43	93.4
Possible	02	4.34

Table 5: Drugs associated with systems involved in ADRs

Drugs	Systems involved in ADRs	Percentage (%)
Iron carboxy maltose+Iron sucrose	Cutaneous	20
Antibiotics ()	Cutaneous+GIT	55
NSAIDs	Cutaneous	4.4
Antiemetics	Cutaneous	4.4
Multivitamins	Cutaneous	9
Antiepileptics	Cutaneous	7
Immunosuppressants	Extra pyramidal Symptoms	2

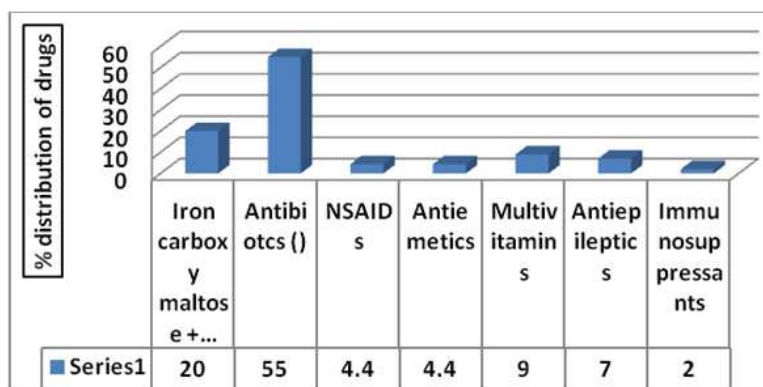


Fig. 4: Drug associated with systems involved in ASRs

DISCUSSION

This study shows 20% of patients suffer due to administration of parental iron preparation during pregnancy and 36% of patients suffer due to antibiotics used in prenatal and postnatal periods suggesting 56% of patients young adult age are females who have attained pregnancy indicating the need of art to establish maternal section in pharmacy section of hospitals wherein closed monitoring of drugs is needed, establishment of P drug concept by Obstetrics and Gynecology department and supply of generic drugs is maintained to restrict cutaneous ADRs [4]. Other drugs which cause cutaneous ADRs include antibiotics used for diarrheal infections, tuberculosis, leprosy, pharyngitis suggesting improvement of hygienic conditions and use of prescribed drugs and to curb over the counter drugs. Use of NSAIDs, antiemetics, antiepileptics is minimal. The percentage of cutaneous ADRs caused by branded drugs (63%) is more compared to generic (17%) drugs [5]. Hence generic pharmacies are recommended to decrease the occurrence of cutaneous ADRs.

CONCLUSION

We conclude that cutaneous ADRs are more predominant in females than males as drugs used in pregnancy safe and are responsible for cutaneous ADRs hence need of the hour is to maintain separate section for drugs used in pregnancy with generic drugs in every hospital and caution to be taken for drug lots causing cutaneous ADRs [6]. Rise of every clinician to develop "P" drug concept in order to use drugs in pregnant women.

AUTHORS CONTRIBUTIONS

All the author have contributed equally

CONFLICT OF INTERESTS

Declared none

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