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A Clinico Etiological Study of Cutaneous Drug Eruptions

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ABSTRACT
Background: *To study the clinical spectrum of Cutaneous adverse drug reactions (ACDRS) in hospitalized patients and to establish a causal link between the drug and the reaction by using WHO causality definitions.*
Objectives:
1. *To calculate prevalence of ACDRS*
2. *To evaluate various etiological factors*
3. *To study clinical patterns*

Methods: *All patients attending to the OPD and IPD of D.V.L. and patients referred from other departments with suspected ACDRs were included in the study.*
Results: *In the present study most common offending drug group is antimicrobials (48.6%) followed by 20% of anticonvulsants, 12.8% cases of NSAIDS and 18.6% others. Common morphological types of ACDRs were acneiform eruptions, F.D.E, maculopapular rash, TEN-SJS, Dapsone syndrome and Pruritis.*
Keywords: *Adverse Cutaneous drug reactions- Etiology- Drug eruptions*

INTRODUCTION

The drug eruptions are unwanted and unintended mucocutaneous reactions which occur on administration of diagnostic or therapeutic agent.

The prevalence of drug reactions depends on many factors including genetic and racial factors. Some drugs which are banned in developed countriesare still in use in India. In addition, India is known for its indigenous medicines which canalso be a source of drug eruptions.

Incidence of drug eruptions in our country varies between 6to 30 % and about 8% hospital admission are due to drug eruptions. Internationally drug eruption occurin 2-3% of Patients.

Drug eruptions range from pruritus to severe life-threatening Stevens-Johnson Syndrome (SJS) or toxic epidermal necrolysis.

The diagnosis of cutaneous eruption is based on detailed history and correlation between drug intake and the onset of rash. Cutaneous drug eruptions are visible and hence reporting is earlier and better when compared to reactions of internal organs and other systems.

MATERIALS AND METHODS

Source of Data

The present prospective study was done over a period of one year from January 2013 to 2014 in the department of D.V.L, S.V. Medical Collge, Tirupati.

The study cases are all patients of either sex attending the D.V.L Department, patients referred from other departments with suspected ACDRs.

The protocol was approved by Human Research Ethics Committee (HREC) of S.V.Medical College, Tirupati.

All cases of ACDRs willing to participate and having causality assessment scale are included in the study.

Patients not willing to participate in the study and patients dropping out the study were excluded .Investigations like complete hemogram, L.F.T., R.F.T., Skin Biopsy, VDRL and HIV testing were carried out

The Criteria for the diagnosis of ACDRs

1. The time interval between the introduction of the drug and the onset of reaction should be within specific time described in literature for each reaction.
   For example Maculopapular rash :<7 days, Urticaria : 7-21 days, SJS-TEN : 1-3 weeks etc.
2. Improvement in the condition of patient after withdrawal of drug .
3. Based on the W.H.O causality definition, ACDRs were catergorised as Certain, Probable, Possible and Unlikely

RESULTS AND DISCUSSION

A total 22,073 patients attended department of D.V.L. during study period of which 70 cases had ACDRs.

The prevalence ratio is 0.0032% in the study, mean age of patients is 33.47%. In this study most of them i.e. 32/70 were in the age group of 21-40 years followed by 14/70 in 41-50 years of age, then 10/70 in 11-20 years of age, 8/70 in the age group of >50 years and 6/70 cases were 0-10 years of age.

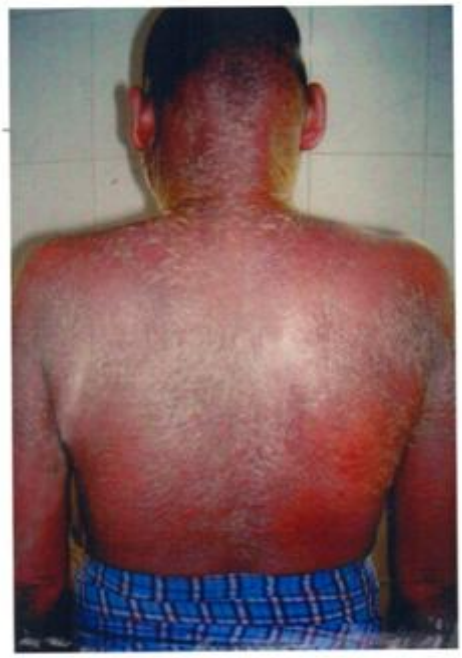
The male to female ratio 2.181(48 male and 22 female).

Morphological Types of ACDRs

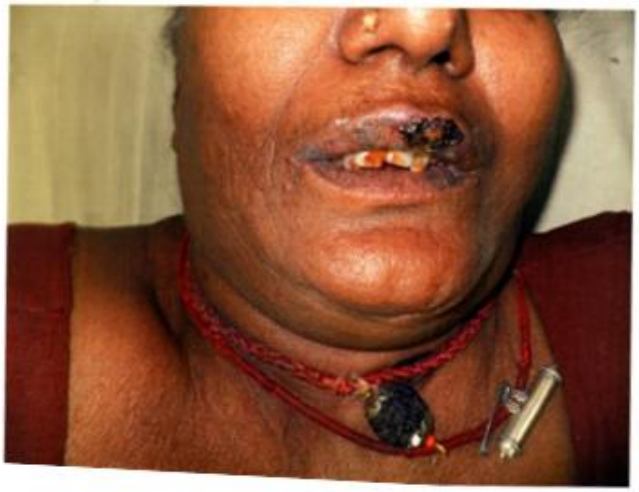
Type of Drug Reaction	No. of Cases	Percentage (%)
Acne form eruptions	17	24.28
Fixed drug eruptions	13	18.52
Morbilliform rash	10	14.28
Toxic Epidemolytic Necrolysis	6	8.75
Dapsone syndrome	3	4.28
Erythema multiforme	1	1.43
Purpura	1	1.4
Exfoliative dermatitis	2	2.85
Pruritis	3	4.28
Stevens Johnson Syndrome	4	5.71
Urticaria	2	2.85
Lichenoid eruptions	2	2.85
Psoriasiform eruptions	2	2.85
Peeling of palmar skin	1	1.43
Acute generalized exanthematouspustulosis	1	1.43
Eczematous eruption	1	1.43
Drug rash with eosinophilia & systemic symptoms (DRESS)	1	1.43
TOTAL	70	100

ACDRs vary in the pattern of morphology and distribution. Acneiform eruptions were the most common drug eruptions (24.28%) folloed by fixed drug eruptions (18.52%).

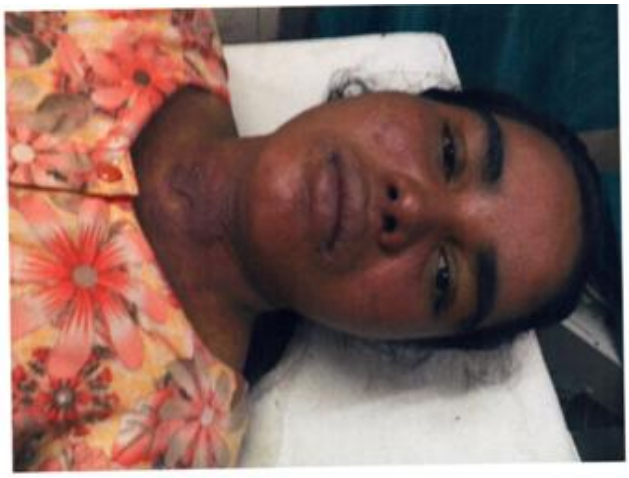
Acneiform Eruptions



Exfoliates dermatitis

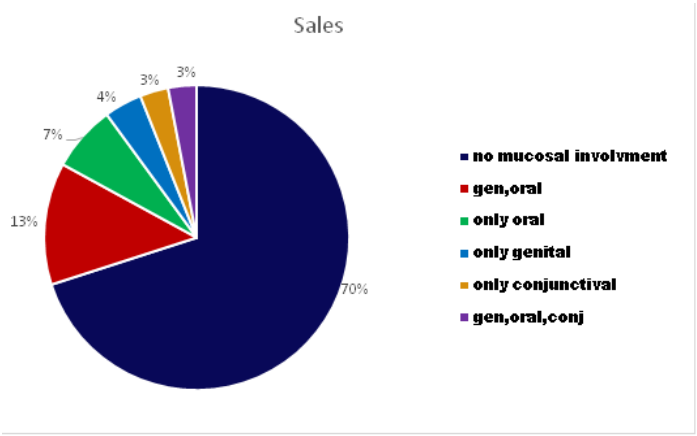


Fixed Drug eruption on Lip



Carbamazepine Induced Maculopapular Rash

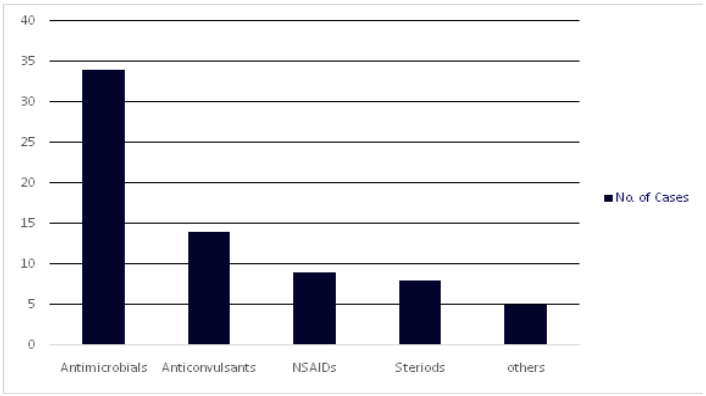
Mucosal Involvement in ACDRs



In our study, visceral involvement may predict poor prognosis seen in patients with S.J.S.-TEN and Dapsone syndrome.

Commonly incriminated drugs were Phenytoin (14.28%) followed by diclofenac (10%) followed by cotrimoxazole (7.21%).

When looked at drug groups macrolides 48% (13/70 cases) followed by antiepileptics 20% (14/70 cases), NSAIDS (7/70)cases, steroids 11.4% (8/70) cases. This is in concordance with an earlier report from North India.



Antimicrobials and NSAIDs are commonly prescribed drugs by physicians and general practitioners, even quacks for trivial illeness so there are more chances of developing reactions to these groups.

CONCLUSION

After a cutaneous drug eruption has been diagnosed and treated, clear information must be provided to the patient regarding his/her drug rash.

Advised the patient to carry a card, informing about their reaction and the offending drug is necessary.

Finally cutaneous drug reaction are to be reported to the manufacturer and regulatory agency especially if skin eruption is rare, serious or unexpected.

Drug reactions are common reason for litigation, warning a patient about potential adverse effects and before prescribing a medicine previous history of drug eruption should be taken.

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