STUDY OF FIXED DRUG ERUPTIONS IN KARACHI

Pages with reference to book, From 175 To 177

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Abstract

Thirty three patients with fixed drug eruptions were subjected to provocation tests. Otrimoxazole was the commonest drug responsible, followed by trirnethoprim, Beserol and tinidazole. There was cross sensitivity among sulphonamides. Polys&isitivity was recorded with one case each of Ampicillin and Beserol to Cotrimoxazole (JPMA 37: 1 75, 1987).

INTRODUCTION

Fixed drug eruption is one that recurs at the same anatomic sites following re-exposure to the same drug. The patho-genesis of this eruption is not known. Both the immunological and toxic mechanisms have been implicated, but conclusive evidence is lacking. The incidence of this malady varies from country to country and from time to time.

This study was carried out over a nine months period, January to September 1986. The objective was to find out which of the most commonly used drugs were causing fixed drug eruptions.

MATERIAL AND METHODS

Provocation is the only reliable method that is internationally accepted. Thirty three patients were included in this study. Clinical history of drug intake was obtained to narrow down the number of possible culprit drugs. Each patient was then given symptomatic treatment and the acute phase of eruption was allowed to subside. Then the drug strongly suspected was given and the patient observed for next twenty four hours. If no reaction occurred, he was switched over to the next drug. Same method was us6J to find out cross-sensitivity and polysensitivity.

RESULTS

Of 33 patients studied, 27 (17 males and 10 females) were sensitive to various drugs, while 2 males and 4 females did not show reaction to the drugs given. The age and sex distribution is sh.)wn in Table I.

TABLE – I
Age and Sex.

AGE (Years)	Males	Females
0 – 10	–	–
11 – 20	3	7
21 – 30	7	5
31 – 40	2	3
41 – 50	3	–
51 – 60	4	–
	18	15

None of the patients was below ten years of age. This is similar to the findings of a recent study at the National Institute of Child Health, Karachi (to be published separately), where not a single case of fixed drug eruption was found in children. However, fixed drug eruptions do occur in children of this age group.

The number of patients tested with each drug and the causative drugs in these patients, are shown in Table II.

TABLE – II

Number of Patients Tested with Each Drug.

S. No.	DRUGS	TOTAL	POSITIVE	NEGATIVE
1.	Cotrimoxazole	22	15	7
2.	Trimethoprim	9	4	5
3.	Sulphadimidine	5	3	2
4.	Beserol (Paracetamol + Chlormezanone)	6	3	3
5.	Tinidazole	2	2	–
6.	Avafortan (Metamizole + Avapyrozone)	4	2	2
7.	Buscopan comp. (Metamizole + Hyoscine butylbromide)	2	1	1
8.	Oxytetracycline	2	1	1
9.	Doxycycline	2	1	1
10.	Sulphadiazine	2	1	1
11.	Ampicillin	2	1	1
12.	Griseofulvin	1	1	0
13.	Optalidon (Propyphenazone + Butalbital + Caffeine)	2	1	1
14.	Paracetamol	3	1	2
15.	Metamizole	3	0	3
16.	Phenylbutazone	1	0	1
17.	Acetylsalicylic acid	2	0	2
18.	Amoxycillin	1	0	1
19.	Chlorpromazine	1	0	1

The highest number of fixed eruptions were due to Cotrimoxazole. This is in contrast to various studies done in Libya[1]., India[2]., Finland[3]. and England[4].. Eight patients with Cotrimoxazole sensitivity were further tested with trimethoprim as well as sulphadimidine and suiphadiazine. Trimethoprim produced a reaction in four patients while cross sensitivity to suiphadimidine was positive in three cases. One patient was sensitive to both suiphadimidine and trimethoprim. One case was cross sensitive to

suiphadiazine.
Three cases had fixed eruptions due to Beserol and two due to Tinidazole. Two showed positive reaction to Avafortan and one each to Buscopan compositum, Oxytetracycline, Ampicillin, Griseofulvin, Optalidon and Paracetamol. No fixed drug eruption was produced by Metamiiole Phenylbutazone, Acetylsalicylic acid, Chiorproma zine and Amoxydilhin.
Cross sensitivity was found between Cotrin Exazole and Suiphadimidine in three cases,while polysensitivity was recorded, with one caseeach of Ampicillin and Beserol, to Cotrimoxazole.
Bullous type of fixed eruption was produced by Cotrimoxazole in five patients, Beserol in two patients and Ampicillin in one patient.
Practically every part of the body was involved. The maximum number of cases were.seen on the legs and lips.

TABLE – III
Sites of Involvement.

Affected Sites	Cases
Legs	14
Lips	12
Trunk	9
Arms	9
Hands	6
Neck	5
Feet	5
Glans penis	5
Breasts	3
Buttocks	3
Eyelids	2
Face	1
Tongue	1

Table III shows sies of involvement in order of decreasing frequency.

DISCUSSION

According to this study Cotrimoxazole accounted for the highest number of cases of fixed drug eruptions. This is in contrast to a study from India2 where Metamizole and Tetracycline were incriminated in maximum number of cases. In our cases only two showed posuive reaction to Tetracycline. In the study from Libya', only 4.3% cases were sensitive to Sulphamethoxazole, while Acetylsalicylic Acid accounted for largest number of fixed eruptions. In our cases the latter did not pmduce even a single reaction. Savin3 in his study reported barbiturates and Phenolphthalein as being the most common drugs causing fixed eruption. Kauppinen4 in 1972 and again in 19845 reported barbiturates and Phenazones among the common offending drugs.

Cotrimoxazole, Ampicillin and Beserol produced bullous fixed eruptions in our cases, while not a single case was positive with these drugs in Kauppinen and Stubb's study[5]. Only one case of Ampicillin shows bullous reaction in twenty three cases in the study by Kanwar et al[1].

It is noted that fixed drug eruption has rarely been reported with Metronidazole[6] which belongs to a group of 5-nitroimidazoles, but never with the structurally related compounds e.g. Tinidazole and Nimorazole.

Cross sensitivity between Cotrimoxazole and Sulphadimidine was recorded in three patients; this differs from Pasricha's study[2] in which no case of cross sensitivity among Sulphonamides was detected. He found cross sensitivity between Oxyphenbutazone and Phenylbutazone,while our cases failed to show reaction to these drugs.

Polysensitivity was reèorded with each case of Ampicillin and Beserol to Cotrimoxazole, which again differed from the Indian study[2] where polysensitivity between Oxyphenbutazone and Phenobarbitone and between Saridon and Metamizole was noticed.

This shows that the relative incidence of fixed eruption due to a particular drug varies from country to country and from time to time, depending upon the frequency of prescription. The minimum provocative dose in our cases was less than daily therapeutic dose. This is similar to the results of Pasricha[2], and Kauppinen and Stubb[5].

It is therefore, important to invariably establish the causative drug in each case of fixed eruption, so that Vie drug may be avoided in future. For this purpose, provocation method is reasonably safe and reliable.

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