Clinical and Etiological Study of Skin Drug Eruptions in Mid Euphrates Region of Iraq

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دراسة سريرية وبائية للحساسيات الجلدية الدوائية في منطقة الفرات الأوسط في العراق

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الخلاصة:

مقدمة الدراسة:

تعتبر الحساسية الدوائية الجلدية من الحالات المهمة في الوقت الحاضر وتعتبر التأثيرات الجلدية من أهم الأعراض الجلدية المصاحبة لاستخدام الأدوية المختلفة.

هدف الدراسة :

نظمت هذه الدراسة لاستكشاف الأشكال السريرية لحالات الحساسية الجلدية الدوائية ومعرفة الأدوية المسببة لها.

طرائق الدراسة:

تمت دراسة خمسين حالة من الحساسية الجلدية المختلفة والناتجة عن استخدام الأدوية من مراجعي استشارية الأمراض الجلدية في المستشفى التعليمي للفترة من كانون الثاني ٢٠٠٨ إلى كانون الثاني ٢٠١٠ في مدينة النجف. اعتمد التشخيص على سرد تاريخ المرض والفحص السريري المفصل للحالات وتم التأكد منها بعد ان كان إيقاف استخدام هذه الأدوية مصحوبا باختفاء تام للأعراض السريرية الناتجة عن استخدامها.

نتائج الدراسة :

تضمنت الدراسة خمسون مريضا (٢٨ ذكرا و ٢٢ انثى) وكانت الفئة العمرية الغالبة بين ٤١ إلى ٥٠ سنة ثم تتبعها الفئتين بين ٢١ إلى ٣٠ سنة و ٣١ الى ٤٠ سنة. كانت اكثر الحساسيات الجلدية شيوعا هي الحساسية الدوائية الثابتة في ٣٠% من المرضى إضافة الى حساسيات الشري الجلدي والوذمة الجلدية والحساسية شبيهة الحصبة والحكة الجلدية.

كانت الأدوية الأكثر تسببا في الحساسية الجلدية هي المضادات الالتهابية الغير ستيرويدية في ٢١% ودواء الكوتريموكساسول في ١٤% من الحالات.

الاستنتاج:

يمكن ان تتسبب كافة الادوية في حدوث حساسيات جلدية مختلفة وهذا يجب ان يؤخذ بنظر الاعتبار عند تقييم المفعول العلاجي لاي دواء.

ABSTRACT:

Background:

Cutaneous drug eruptions have become very common in recent times. They are the most common adverse reactions attributed to drugs.

Objective:

To verify the clinical pictures of allergic skin cases and the identifying the causative drugs.

Methods :

A study of 50 cases of skin drug eruption resulting from drug administration who attended the consultation clinic of dermatology in The Teaching Hospital in Najaf for the period from January 2008 to January 2010 .The diagnosis depended on the full history and clinical examination including standard case criteria . The diagnosis was confirmed by withdrawal of the drug and notifying the disappearance of the skin eruptions and clinical picture of the skin allergy that was resulted from the drug administration.

Results :

The study included fifty patients; 28 males and 22 females. Most of cases were found in age group 41-50. The most frequent skin allergic reaction was the fixed drug eruption (30% of cases). The drugs which frequently caused eruptions included non steroidal anti inflammatory drugs (21%), and cotrimoxazol (14%) of total cases.

Conclusion :

All drugs may cause drug eruptions and have to be considered when prescribed to the patients.

INTRODUCTION:

Cutaneous drug eruptions have become very common in recent times. The incidence of cutaneous drug eruptions is about 2.2% and is higher amongst inpatients and females. [1]. Fatal reactions to drugs occur even though benign reactions are more common. The incidence increases in proportion to the number of drugs prescribed. [2[

Cutaneous drug eruptions are the most common adverse reactions attributed to drugs. Any skin disorder can be imitated, induced or aggravated by drugs. [3[

The diagnosis of cutaneous drug eruptions is based on detailed history and correlation between drug intake and the onset of rash. The history-taking for drug intake is an art, which includes direct, indirect, suggestive, evocative and repetitive questioning. It takes time, but answers are golden in case of cutaneous drug reactions and drug-induced dermatitis. [4], [5], [6[

AIM OF THE STUDY:

The present study was carried out to know the clinical pattern of drug reactions, to recognize the offending drug (self-medication or prescribed), to educate the patients, to avoid self-administration of drugs and re administration of offending drugs.

PATIENTS AND METHODS:

A prospective study comprising of 50 cases of drug reactions was carried out from Jan. 2008 to Jan. 2010, in the dermatology outpatient clinic in The Teaching Hospital in Najaf city. The diagnosis was based on detailed history and clinical examination.

Patients with cutaneous drug reactions attending the outpatient clinic were studied0. Precise history of drug ingestion and self-medication was taken. Careful history of symptoms, other existing skin and systemic diseases, or any other illness were taken.

Thorough clinical examination was carried out. Skin, hair, nail and mucosa (eye, oral and genital) were examined.

The diagnosis of cutaneous drug reaction was based on history of drug ingestion, clinical findings and exclusion of other similar disorders. Diagnosis was confirmed by observing disappearance of signs and symptoms after discontinuation of drugs.

Patients were given a list of common drugs causing particular types of reactions and advised to avoid these drugs, and chemically related drugs.

Their family members were advised to avoid particular groups of drugs.

RESULTS:

Fifty patients (28 males and 22 females) were studied. Their ages ranged from 5 to 70 years (mean age 43). Maximum patients belonged to the age group of 41-50 years, followed by 21-30 and 31-40 years [Table 1]. Period of development of skin lesions after intake of drug varied from 1 day to more than 30 days.

Offending drugs:

No steroidal anti-inflammatory drugs were the most implicated drugs in 21% of cases; followed by cotrimoxazole in 14% of cases.

Patterns of cutaneous drug reactions:

The commonest pattern of cutaneous drug reaction observed was Fixed Drug Eruption (FDE) in 30%, followed by urticaria in 24%, morbilliform rash in 20% and pruritus in 14% .Fixed Drug Eruption occurred most commonly due to cotrimoxazole (29.5%), followed by non steroidal anti-inflammatory drugs (NSAIDs) in 22.8%. NSAIDs were also the main agent in causing urticaria, angioedema and morbilliform rash.

Regarding pruritus (14%), it occurred mainly because of antituberculous therapy [isoniazid (INH), rifampicin, pyrazinamide, and ethambutol] and cotrimoxazole. Other drugs implicated were ampicillin, ibuprofen, hydroxyzine hydrochloride, vitamin A and chloroquine.The causative drug of purpura in (2%) was aspirin. Photosensitivity was seen in (2%), mainly due to ciprofloxacin.

Exfoliative dermatitis occurred in (2%) due to carbamazepine and NSAIDs. Steven –Johnson's Syndrome (SJS) in (2%), followed cotrimoxazole and ibuprofen. Angular cheilitis (2%) presented due to isotretinoin [Table 2].

Table 1: Age and Sex distribution of patients with drug eruption

Age groups (Yrs)	Male		Female		Total	
	No	%	No	%	No	%
0 - 10	3	11	1	4.5	4	08
11 – 20	2	7	4	18.2	6	12
21 - 30	3	11	8	36.4	11	22
31 - 40	7	25	3	13.6	10	20
41 - 50	9	32	4	18.2	13	26
51 - 60	2	7	2	9.1	4	08
61 - 70	2	7	0	0	2	4
Total	**28**	**100**	**22**	**100**	**50**	**100**

Table 2: clinical patterns of drug eruption

Clinical pattern	No. of cases	%
FDE *	**15**	**30**
urticaria	**12**	**24**
Morbiliform rash	**10**	**20**
pruritus	**7**	**14**
SJS **	**1**	**2**
purpura	**1**	**2**
Exfoliative dermatitis	**1**	**2**
photosensitivity	**1**	**2**
Acneiform eruption	**1**	**2**
Angular chelitis	**1**	**2**
TOTAL	**50**	**100**

*Fixed Drug Eruption.
**Stevns-Jhonson's Syndrome.

DISCUSSION:

The most common drugs causing reactions were NSAIDs in 21% of cases; followed by sulpha in 14% of cases in our study. Pudukadan et al. reported cotrimoxazole (22.25%), followed by dapsone (17.7%), as the commonest drugs. [2]

The commonest pattern was FDE (30%), followed by urticaria (24%) and morbilliform rash (20%). Similar to this, Pudukadan D et al, reported the commonest

pattern to be FDE (31.1%), followed by maculopapular rash (12.2%). [2] Malhotra et al, reported morbilliform rash in 29.63%, and urticaria in 9.26% cases as common patterns of reaction. [3] Jhaj et al. reported 50% cases of morbilliform rash, 21% cases of urticaria. [4]

Most of the patients had taken medicine for pain, fever and infection. Cotrimoxazole was the commonest cause of FDE in our study, similar to that found in the study by Singh et al. [5] NSAIDs and cotrimoxazole were also found to be the common cause of cutaneous drug reaction in the study by Shrivastav et al. [6] ,[7]

Quinolones were a common cause of morbilliform rash and photosensitivity in our study, which might be because of increased use of quinolones. [8]

Ibuprofen was the commonest cause of erythema multiforme (EM) and Stevens Johnson's syndrome (SJS) in our study. Halevi et al, reported SJS due to acetaminophen, [9] while carbamazepine was the commonest cause of SJS in the study by Devik et al. [10] the incidence of acne form eruptions induced by INH was 0.53% in

The study by Sharma PP, [10] while we had 2% of cases with acne form eruptions due to INH.

CONCLUSION:

Every drug must be regarded as potentially hazardous. For each patient, the risk must be weighed against the expected therapeutic benefit.

REFRENCES:

1. Sehgal S, Balachandran C, Shenoi SD. Clinical study of cutaneous drug reaction in 80 patients. ***Indian J Dermatol Venereol Leprol*** 2003; 69:6-7.
2. Pudukadan D, Thappa DM. Adverse cutaneous drug reactions: Clinical pattern and causative agents in a tertiary care centre in South India. ***Indian J Dermatol Venereol Leprol*** 2004; 70:20-4.
3. Malhotra S, Chopra SC, Dogra A, Gupta C. Cutaneous adverse drug reactions-one year pharmacovigilance study in a tertiary care hospital. ***Indian J Pharmacol*** 2004; 36:S41-2.
4. Jhaj R, Uppal R, Malhotra S, Bhargava VK. Cutaneous adverse reactions in inpatients in a tertiary care hospital**.** ***Indian J Dermatol Venereol Leprol*** 1999; 65:14-7.
5. Singh KK, Shrinivas CR, Krupashankar DS, Naik RPC. Study of thirty three cases of fixed drug eruption, ***Indian J Dermatol Venereol Leprol*** 1990; 56:123-.
6. Shrivastava D, Kumar A, Singh SK. Adverse drug reaction monitoring in patients attending skin O.P.D at a teaching hospital. ***Indian J Pharmacol*** 2004; 36:S42.
7. Prasad PV. A study of Dapsone syndrome at a rural teaching hospital in south India. ***Indian J Dermatol Venereol Leprol*** 2001; 67:69-71.
8. Halevi A, Ben-Amitai D, Garty BZ. Toxic epidermal necrolysis associated with acetaminophen ingestion. ***Ann Pharmacother*** 2000; 34:32-4.
9. Devi K, George Sandhya, Criton S, Suja V. Carbamazepine-The commonest cause of toxic epidermal necrolysis and Steven Johnson syndrome: A study of 7 years. ***Indian J Dermatol Venereol Leprol*** 2005; 71:325-8.
10. Sharma RP, Kothari AK, Sharma NK. Acne form eruptions and Ant tubercular drugs. ***Indian J Dermatol Venereol Leprol*** 1995; 61:26-7.