FURAZOLIDINE INDUCED ERYTHEMA MULTIFORME

Lt Col AK DUBEY*, Lt Col RK GUPTA+,
Dr (Mrs) S GOPINATHAN#

MJAFI 2001; 57 : 256-257

Introduction

In clinical practice spectrum of cutaneous reactions to various drugs is a common phenomenon. Drugs usually incriminated are Sulfonamides, Barbiturates, Antitubercular drugs, Antibiotics, Pyrazone derivatives and Non Steroidal Anti-inflammatory drugs [1,2]. Nitrofurans have been described to cause all types of skin rashes [3]. Any infection and any drug can probably give rise to erythema multiforme [4]. As per best of our knowledge and review of literature including Medline search, erythema multiforme exclusively resulting from administration of Furazolidine has not been reported so far. We present a case of erythema multiforme resulting from administration of Furazolidine.

Case Report

10 month old child was admitted with rash over lower back, arms, buttocks and thighs. History revealed that the child was having loose motions and vomiting for which she was given Furazolidine (Furoxone) by a private general practitioner.

She reported to us within 10 hours of the administration of the drug with complaints of development of rash and itching. On examination general condition of the child was stable. Pulse rate was 110/min, temperature - 98.6°F. Respiration was 22/min. There were no lesions seen on oral, anal and urogenital mucosa. Skin over buttocks, arms and thighs showed classical "IRIS" lesions of erythema multiforme with dusky center and bright red raised borders. Palms and soles were spared. Systemic examination was essentially within normal limits. The lesions were confluent at places. There was no conjunctival injection. Furazolidine was stopped and child was treated with antihistaminic and plenty of oral fluids. Skin lesions regressed within 10 days and the child was discharged with the advice not to take Furazolidine in future.

Discussion

Erythema multiforme (EM), Steven Johnson Syndrome (SJ Syndrome) and Toxic Epidermal Necrolysis (TEN) represent a spectrum of which, EM is the mildest form. Exact etiology of EM is not known, but it is known to occur as an adverse reaction to medications, viral infections, of which Herpes Simplex virus is the most common [5]. Herpes simplex labialis and less commonly HSV genitalis have been implicated in

60% of episodes of EM and are believed to trigger nearly all episodes of EM, frequently in association with sun exposure, despite the presence of robust HSV specific immunity.

The pathogenesis of EM is unclear, but it may be host specific cell mediated immune response to an antigenic stimulus, resulting in damage to keratinocytes. Cytokines released by activated mononuclear cells and keratinocytes may contribute to epidermal cell death and constitutional symptoms [6].

Fig. 1 : Classical 'IRIS' lesions of erythema multiforme with dusky center and bright red borders over buttocks, thighs and arms

*Classified Specialist (Paediatrics), +Graded Specialist (Paediatrics), #Trainee (Paediatrics), Base Hospital, Delhi Cantt - 110 010.

All kinds of vaccines, transplantation and certain malignancies like leukaemia and lymphomas can also lead to EM. Nearly 60% of SJ Syndromes and 80-90% of TEN are reported to be due to drugs [7,8].

EM usually has an acute onset and is characterised by target lesions. The lesions may be erythematous, macular, papular, urticarial, vesicular or bullous. These lesions may remain localized to extremities or may become generalized with involvement of oro/genital mucosa and conjunctiva. When mucosal surfaces are involved, it is called as SJ Syndrome and manifests as rhinitis, vulvo-vaginitis and balanitis [7,9,10].

Treatment of EM is supportive. Topical emollients, antihistaminic and non steroidal antiinflammatory agents do not alter the course of the disease, but may provide symptomatic relief. Glucocorticoids have no beneficial role in management, rather they may be permissive of HSV replication and make EM episodes more frequent or continuous. Prophylactic oral Acyclovir for 6 months may be effective in controlling recurrent episodes of HSV associated with EM [6].

Our case did not have any systemic involvement of the mucosal surfaces nor posed any life threatening emergency. The case, however, is being reported for specific association of EM with administration of Furazolidine. Reporting of this case is further considered relevant due to the fact that skin rashes are a very common presentation of many paediatric illnesses and State Consumer Forum has held a Paediatrician negli-

gent for not diagnosing SJ Syndrome, when a child presented with a rash [11].

References

1. Bianchine JR, Macaraeg P, Lasagna L, et al. Drugs are etiological factor in Steven Johnson syndrome. *Am Med* 1968;44:390-450.
2. Nanda A, Kaur S. Drugs induced toxic epidermal necrolysis. *Arch Dermatol* 1990;125:6.
3. Leo X, Liu, Peter F, Weller. Therapy for parasitic infections *Harrison's Principles of Internal Medicine*. 14th ed 1998;1:1173-5.
4. Weatherall DJ, Ledingham JG G, Warrell DA. Specific skin disorders. *Oxford Text Book of Medicine*. 3rd ed. 1996;3780-1.
5. Ghai OP. *Essential Paediatrics*. Interprint. New Delhi. 2nd ed. 1990;363.
6. Huff JC. Erythema Multiforme. In *Principles and Practice of Dermatology*. 2nd ed. Churchill Livingstone. 1996; 488-90.
7. Huff JC, William LW, Marcia T, Denver CO. Erythema Multiforme. A critical review of characteristics, diagnostic criteria and causes. *J Am Acad Dermatol* 1983;6:763-75.
8. Chan HL, Stern RS, Kenneeth A, et al. The incidence of Erythema Multiforme, SJS and TEN. *Arch dermatol* 1990;126:43-7.
9. Ting SC, Adam BA. Erythema multiforme. Epidemiology, clinical characteristics and natural history of 59 patients. *Aust Dermat* 1984;25:83-8.
10. Roujeau JC, Guillaume JC, Paul J, et al. Toxic epidermal necrolysis. *Arch Dermatol* 1990;126:37-42.
11. Singh J, Bhushan V. *Indian and Foreign Case Laws on Medical Negligence*. Medical Negligence and Compensation. Bharat Law publication.. Jaipur, 2nd ed. 1999;319.