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CASE REPORT ON PHENYTOIN INDUCED STEVENS JOHNSON SYNDROME

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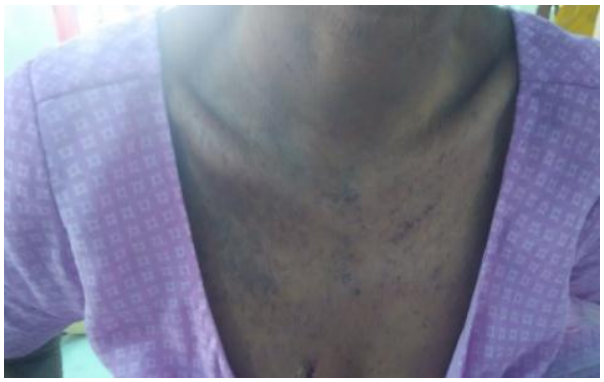
INTRODUCTION

Modern day drug therapy for the control of seizures has made great studies in the recent past. The adverse reactions, although rare, still remain a major threat to the patient welfare. Stevens-Johnson syndrome (SJS) is one such fatal drug reactions. "A new eruptive fever with stomatitis and opthalmia" was described as a severe variant of erythema multiforme & was termed by Steven and Johnson in 1922. By the 1940's it was commonly called as "Steven Johnson's syndrome (SJS)". The concept of the spectrum of erythema multiforme has been widely accepted since that time.[1] The overall incidence of Stevens Johnson Syndrome is seen 1 to 6 per million per Year.[2] When more than 30% Body Surface Area sloughing is present, the mortality rate rises to 25%.[3] The incubation period is 4 days to 4 weeks. SJS is characterized by sudden onset, marked constitutional symptoms of high fever, malaise, myalgia, arthralgia and extensive erythema multiforme like lesions and subsequent skin blisters and erosions. Early diagnosis and treatment is associated with favourable prognosis and less incidence of complications.[4] Phenytoin is the most commonly prescribed antiepileptic drug in adults.[5] phenytoin (PHT) was the most common cause of antiepileptic drugs (AEDs)-induced cutaneous adverse reactions.[6]

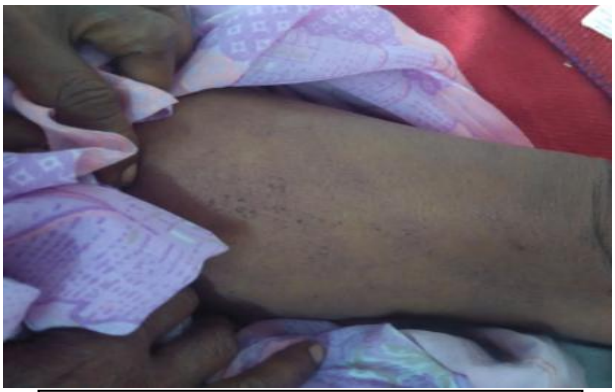
CASE REPORT

The patient is 55 years old, female, belongs to a poor socio economic background, weighing 54kgs. She presented to our outpatient department due to/with chief complaints of desquamation of skin over thighs, lips, tongue and trunk (involvement up to 30%). The patient had a 2-year history of idiopathic generalized epilepsy. Physician prescribed phenytoin 100mg BD dose for treating seizures, but patient was not adherent to the treatment. The patient was suffered with one episode of the generalized seizures 20days back, relived by the phenytoin 100mg dose. From the occurrence of seizures episode patient take medications regularly (T.phenytoin 100mg BD).After 20days patient was developed desquamation of skin over thighs, lips, tongue and trunk.



Clinical photograph showing desquamation of skin over neck and chest region

On admission, patient was afebrile, conscious and coherent. Physical examination showed widespread erythematous macules and papules without blisters over her thighs, lips, tongue and trunk region. The estimated desquamation of skin was approximately 30% of body surface area. Desquamation of skin rashes on the lips, thighs and diffused oral ulcers were also observed. No history of hypertension and diabetes. Laboratory examinations including complete hemogram, liver function tests, renal function tests, viral markers, abdominal ultrasound scan, were normal. The patient was diagnosed as phenytoin induced SJS.



Clinical photograph showing desquamation skin over thigh

Phenytoin was stopped, sodium valproate 200mg BD was prescribed/given orally started because of the adverse drug reaction. Dexamethasone 8mg BD was prescribed intravenously for 3 days to treat erythematous macules. Chlorhexidine mouth rinse (0.2%) was advice to the patient for the oral ulcers to heal quickly. After 3 days of treatment and stoppage of Phenytoin the eruptions almost disappeared. She was discharged on day-4 with the healing of the lesions and improvement of the general condition. She was advised a routine check up with continuation of medication for the seizures. Patient having history of non compliance to the treatment, for improving compliance to the treatment counseling was performed.

DISCUSSION

Stevens Johnson Syndrome is expansion of cytotoxic T - lymphocytes, leading to an infiltration of skin lesions with cytotoxic T-lymphocytes and natural killer cells. Granulysin probably is the key mediator for disseminated keratinocyte death in SJS/TEN.[7] Corticosteroids used as a treatment for many drug induced Stevens Johnson Syndrome.[8,10]

A study with adverse reactions of Stevens Johnson Syndrome due to anti-seizure drugs revealed that they had the higher chance (81.8%) of causing severe eruption that is SJS than NSAIDs (53.84%) and Antimicrobials (34.48%). This is higher as compared with the previous report (70%). The exact mechanism of SJS is still unknown.[9]

Naranjos causality scale was used asses Phenytoin induced SJS. The following data was considered: conclusive reports on association of Phenytoin with Stevens Johnson Syndrome (SJS) (score 1); appearance of SJS after Phenytoin was given (score 0); improvement of SJS following discontinuation of Phenytoin (score 1); no other alternative causes that could have caused this reaction (score 2) ; whether the reaction appeared when placebo was given (score 0); total score of 4 was seen. Based on the score, Phenytoin induced Stevens Johnson Syndrome classified as probable reaction.

CONCLUSION

Early diagnosis with the prompt recognition and withdrawal of all potential causative drugs is essential for a favorable outcome. Corticosteroids have for years been the mainstay therapy for SJS in most cases, as in our case. Lack of physician and pharmacist knowledge in drugs, lack of patient counseling, poor patient compliance leads to development of life threatening idiopathic adverse drug reactions.

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