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Case Report

Phenobarbital induced Stevens-Johnson syndrome: a case report

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ABSTRACT

Stevens-Johnson Syndrome (SJS) is a life-threatening acute hypersensitive reaction affecting the skin and mucous membranes. We report a case with SJS likely induced by phenobarbitone during the switch of sodium valproate and phenobarbitone regimen. The patient reported fever with fluid-filled lesions all over the body and redness and burning sensation of both the eyes. Peeling of the skin due to rupture of the fluid-filled lesions and pigmentation on the skin for 10 days. Based on a physical examination and laboratory findings, he was diagnosed with Phenobarbital induced Stevens-Johnson syndrome. The patient was administered systemic steroid therapy and treated symptomatically and finally replaced with phenobarbitone and sodium valproate. During the hospital stay, the patient appeared normal and the skin lesions disappeared, after two weeks of treatment.

Keywords: Stevens-Johnson syndrome, Sodium valproate, Phenobarbitone

INTRODUCTION

Phenobarbital after completing of 100-year existence in the market is still the most widely prescribed antiepileptic drug (AED), and remains a cost-effective drug of choice in epileptic patients.[1] Present a decline stage in its use is observed because of a significant tolerance issue, both in children and adults.[2] Phenobarbital is being related to other anti-epileptic agents with dose-dependent and idiosyncratic drug reactions.[1] Being administered in high doses with a therapeutic strategy more is always better phenobarbitone is producing toxic effects. Adverse drug reactions produced by phenobarbitone are more selective such as sedation, behavioral, and mood effects in children, and in causing teratogenicity in exposed infants.[3]

Stevens-Johnson Syndrome (SJS) is an IgE mediated hypersensitivity disorder which typically involves the mucocutaneous membranes. SJS is a rare disorder with the potential for severe morbidity and mortality occurs very commonly in geriatrics due to the use of more number of drugs.[4]

CASE REPORT

A 44-year-old male was presented to our emergency department due to fever with fluid-filled lesions all over the body and redness and burning sensation of both the eyes. Peeling of the skin due to rupture of the fluid-filled lesions and pigmentation on the skin for 10 days. The patient had a history of idiopathic generalized epilepsy since five years and is prescribed with Sodium Valproate 600 mg daily, and the incidence of seizures was significantly under control. For one month, he had episodes and Sodium Valproate was withdrawn due to incomplete seizure control, and phenobarbitone (60 mg/day) was introduced into his therapy. After administering phenobarbitone he developed maculopapular rashes occurred all over the body (Figure 1) with fever. The patient was then shifted to the department of dermatology. On physical examination showed an extensive erythematous macules and papules with blisters and detached epidermis on his face, neck, trunk, feet, and lower limbs. Skin detachment was approximately 10% of body surface area with scattered skin rashes on the upper limbs and diffuse oral ulcers

were also observed. Laboratory examinations, including a complete blood picture, and abdominal ultrasound scan, were found to be normal. The patient was diagnosed as phenobarbital-induced SJS. After being treated with steroids and antihistamine for two weeks, the patient greatly improved, and he was discharged.

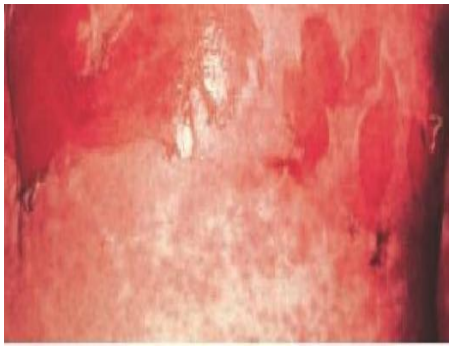

Figure 1: Erythematous macules and papules with blisters and detached epidermis.

DISCUSSION

Stevens-Johnson syndrome was first described in1922, as an acute mucocutaneous syndrome characterized by severe purulent conjunctivitis, stomatitis with extensive mucosal necrosis, and purpuric macules.[4] The incidence of SJS associated with drug use was 1.8 per one million. The diagnosis of SJS is based on clinical features such as an acute onset of rapidly expanding erythematous macules, necrosis and detachment of the epidermis along with erythema. The patients usually develop a hypersensitivity reaction between hours and two weeks after starting the medicine.[5] Our patient had erythematous rashes on the skin and mucous involvement two days after starting phenobarbitone treatment. During these two days, he took no other medicine except phenobarbitone. Although many factors have been proposed as risk factors of SJS, including drug induced, infections, malignant disorders and graft rejection, most of them were due to the adverse effect of drugs. The most common drugs are NSAIDs, antipsychotics, antibiotics, Allopurinol, and anticonvulsants.[6] Several agents have been tried in the management of this disorder. Systemic corticosteroids are used in the early stage of SJS. Therapeutic management is by parenteral administration of glucocorticoids, N-acetyl cysteine, pentoxifylline, and anti-TNF-alpha antibodies, chlorhexidine oral rinses help for oral ulcers and white-soft paraffin application on lips relieves the pain. The causality assessment of SJS with phenobarbital using Naranjo's causality assessment scale[7] showed the reaction may be probable and WHO Uppsala Monitoring Centre (UMC) causality assessment criteria also indicated a probable association with phenobarbital.[8]

CONCLUSIONS

Stevens-Johnson syndrome is a potential drug induced fatal disorder. Prescribers must therefore be more cautious before prescribing the drugs to their patients. Patients should be educated regarding the adverse effects, especially in case of old aged.

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