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STEVENS - JOHNSON SYNDROME DUE TO PHENYTOIN: A CASE REPORT

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ABSTRACT

Stevens-Johnson syndrome disease may be considered as a cytotoxic immune reaction to drugs and infection. This is a case report of Stevens-Johnson syndrome due to a Phenytoin which was used in the treatment of epilepsy (seizures) in a 60 year old female patient.

Key words: Adverse drug reaction, Stevens-Johnson syndrome, Phenytoin

INTRODUCTION

Stevens-Johnson syndrome, otherwise known as Erythema Multiforme Majus, is thought to represent a continuum of disease, the most benign type of which is erythema multiforme, whereas toxic epidural necrolysis is the most severe.[1] The condition was first described in 1922 by Stevens and Johnson as a febrile illness with stomatitis, purulent conjunctivitis, and skin lesions. [2] The syndrome is generally described as vesiculobullous erythema multiforme of the skin, mouth, eyes, and genitals. [3]

Stevenson Johnson Syndrome is a serious systemic high magnitude allergic disorder characterized by an expression of Erythema Multifom a rash on the skin and mucous membrane, which leads to extreme morbidity, and even death in extreme cases. This disease occurs as a result of allergic reaction to immunologic stimuli such as drugs and infectious agents. Apart from allergies, there may be other effects in the visual, vaginal, urethral, nasal and lower respiratory tract. This disease is Idiopathic (the cause is not known). It is a

hypersensitive complex syndrome. Several drugs have been identified during the last decade as a triggering cause:

- NSAIDs, especially Ibuprofen
- Anticonvulsants (Phenytoin, Valproic acid, Phenobarbital, Carbamazepine)
- Antibiotics (Sulphonamides, Aminopenicillins, Quinolones, Cephalosporins, Tetracyclines, Iimidazole , Antifungal agents
- Allopurinol
- Corticosteroids

Nikolsky first described the sign that bears his name in 1896. He related how, after rubbing the skin of patients who had pemphigus foliaceus, there was a blistering or denudation of the epidermis with a glistening, moist surface underneath. [8] According to his explanation, the skin showed a weakening relationship and contact between the corneal (horny) and granular layers on all surfaces, even in places between lesions (eg, blisters, excoriations) on seemingly unaffected skin. [5] Nikolsky's observations were later confirmed by Lyell in 1956, who described a Nikolsky sign in patients with toxic epidermal necrolysis. [8]

CASE REPORT

A 60 year old woman was admitted to the BMCH & RC, Chitradurga, with the complaining of fever, skin rash all over the body and ulceric in the mouth since 1 week. The patient is a known case of epilepsy disorder (Left Frontal Meningioma) for which medications were being used. The drug was given by National Institute of Mental Health and Neuroscience, unfortunately, she noticed to develop skin rash on the face and all over the body and trunk as shown in the (fig1). The rashes were associated with conjunctivitis, swelling of the lips, low grade fever. She was admitted previously with the similar complaints.

Investigation during hospitalization

The lab investigations were revealed Aspartate Amino Transferase (AST) 58IU/L, Alanine Amino Transferase (ALT) 140IU/L, Hb (Hemoglobin)11.4gm%, Pus cells 5-6/HPF, Total protein 6.09mg/dl, Serum alkaline phosphate 90IU/L, Albumin 3.9gm/dl and Globulin 2.1gm/dl. Serology report salmonella typhi-o-antigen+1:80 and H- antigen+ 1:320. The objective evidence shows the **Nikolsky sign is positive.**

After admission into the hospital the patient was advised to stop the medication and the following treatment has been started, Dexamethasone 2cc IV/TID, ChlorPheniramine maleate 2cc IV/TID, Ceftriaxone 1gm IV/BD, Paracetamol 500mg/TID and Emollient cream were prescribed.

After the sixth day of the treatment the following condition have been observed, Skin rash started to fade away and no fever. She had taken other drug apart from the antibiotics. She had history of adverse drug reactions with Phenytoin (TID) for 1episode. Other personal and family history was unremarkable. The diagnosis of Stevenson Johnson Syndrome was made on the basis of clinical findings.

Fig 1: Phenytoin induced SJS (rashes present all over the body)

DISCUSSION

The Patient previous history she was admitted in NIMHANS Hospital Bangalore, India because having left frontal Meningioma. Left frontal Meningioma is usually benign tumors which arise from the meninges covering of the brain and spinal cord, the arachnoids. About 1 of every 5 brain tumors are Meningioma, meningiomas become symptomatic in several ways. During their slow growth, they may irritate the brain causing epileptic seizures. In that seizure is one of the symptoms of Meningioma in this case one episode happened seizures so they prescribed Phenytoin 100mg TID dose. Physician advised to take Phenytoin 80 doses of phenytoin but in 56^{th} dose Phenytoin induced or caused the adverse effect of whole body rashes. Then patient stopped the Phenytoin drug. Then the patient came to Basaveshwara Medical College hospital and Research Centre. As phenytion sodium has been the inciting agent in the present case it was withdrawn and the patient was treated with systemic and topical Corticosteroids, Antibacterials and ointments. But the doctors stop the Phenytoin and

no any other drugs prescribed for epilepsy they referred patient back to NIMHANS Hospital Bangalore.

Steven Johnson syndrome is characterized by bullous lesions on the skin along with mucous membrane involvement. The various causes of SJS include hypersensitivity reaction to drugs besides others. The drugs common offenders are Sulfonamides, Penicillins, Barbiturates acetyl salicylic acid and Phenylbutazone[4].

Nikolsky sign may have prognostic value in patients with bullous skin diseases. One study described 2 distinctly different versions of the sign 1) “wet” Nikolsky’s sign, in which a moist, glistening base of eroded skin is seen after pressure is exerted on the skin; and 2) “dry” Nikolsky’s sign, in which a dry base of eroded skin is seen after pressure is exerted on the skin[5].

The role of systemic corticosteroid is controversial but short term administration of intravenous systemic corticosteroid is sometimes advocated if it is started within the first 2-3 days of a drug-induced reaction[6].

This case is illustrative of the considerable morbidity associated with irrational and indiscriminate drug usage. The problem is compounded by the fact that drugs that have a high incidence of side effects or significant risk of fatal idiosyncrasy are commonly sold over the counter, especially in developing countries[7].

CONCLUSION

According to our study we conclude that special attention to skin rash in the first and second month of therapy and instead of polytherapy monotherapy is needed. As the first suspected sign is discovered, Phenytoin should be discontinued immediately and alternative medical management or treatment should be started.

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