



AMERICAN JOURNAL OF PHARMTECH RESEARCH

Journal home page: <http://www.ajptr.com/>

A Case Report of Stevens-Johnson Syndrome Following Administration of Paracetamol and Amoxicillin-Clavulanate

Ratikanta Tripathy^{1*}, T Sundar Sahoo², Manas Ranjan Pradhan³

1. Assistant Professor, Dept. Of Pharmacology, KIMS, KIIT University, Bhubaneswar 751024.

2. Senior Resident, Dept. Of Skin and STD, KIMS, KIIT University, Bhubaneswar 751024.

3. Lecturer, Dept. Of Pharmacology, KIMS, KIIT University, Bhubaneswar 751024.

ABSTRACT

Complications of drug therapy are a major cause of patient morbidity and account for a significant number of patient deaths. Toxic epidermal necrolysis (TEN) and Stevens-Johnson syndrome (SJS) are acute life-threatening mucocutaneous reactions characterized by extensive necrosis and detachment of the epidermis. We report a case of a SJS-TEN overlap in a 22 years old female induced by treatment with paracetamol and amoxicillin.

Keywords: Adverse drug reaction, Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis, causality assessment.

*Corresponding Author Email: dr.ratikantatripathy123@gmail.com

Received 10 January 2015, Accepted 18 January 2015

Please cite this article as: Tripathy R *et al.*, A Case Report of Stevens-Johnson Syndrome Following Administration of Paracetamol and Amoxicillin-Clavulanate. American Journal of PharmTech Research 2015.

INTRODUCTION

Cutaneous drug reaction is one of the common forms of adverse drug reaction manifestations. It ranges from mild fixed drug eruption to severe and life threatening Stevens -Johnson syndrome (SJS) and Toxic Epidermal Necrolysis (TEN). These severe reactions are characterized by severe purulent conjunctivitis, severe stomatitis with extensive mucosal necrosis, and purpuric macules. The common culprits involved in causing these reactions are antimicrobials followed by nonsteroidal anti-inflammatory drugs (NSAIDs), anticonvulsant drugs, and anti-gout drugs¹. Incidence of SJS and TEN is 2.6-7.1 persons per million populations per year in United States.²

Case Presentation

A 22 years old female is presented with acute onset of extensive vesiculation and peeling of skin along with erosions on conjunctival and oral mucosa. To start with the patient had a sore throat and fever for which she took tablet preparation containing (Paracetamol, Phenylephrine, Chlorpheniramine, Caffeine) two doses without consultation with any physician. Next day patient developed multiple pinhead size erythematous macules on extremities. Gradually there was collection of fluid under skin lesions. Patient discontinued the medication. He consulted a local physician and he was prescribed with Amoxicillin + clavulanate, Paracetamol and Levocetirizine. Within 2 days of taking these drugs, the previous lesions were aggravated and there was development of extensive vesiculation and peeling of skin on trunk and extremities along with erosions on oral and genital mucosa (Figure 1 and Figure 2).



Figure 1: Extensive vesiculation and peeling of skin



Figure 2: Involvement of oral mucosa

Ocular involvement was there with conjunctivitis, ocular discharge and erythema. On examination the patient appeared dehydrated. The blood pressure was 112/78 and the pulse was found to be 90. There were no icterus, but patient had anemia (Hb-9.1%). Laboratory investigations done were normal (TWBC- 2400/cmm, total platelet count- 2.3 lacs, RBS- 101 mg/dl, total serum bilirubin 0.5 mg/dl). No evidence of eosinophilia. There was no lymphadenopathy. Serological tests for HIV, HBV, HCV were negative. Patient was provisionally diagnosed as an overlapping case of SJS-TEN on the basis of body surface area involvement and treatment was given. All the suspected drugs were stopped as the first measure. For treatment the patient received fluid therapy, inj. Dexona, Hexidine mouth wash, Lidocaine mouth gel. The patient was advised to use the banana leaves while sleeping since it will prevent the skin detachment and also protect the bullae from damage. With these continued treatments the patient completely recovered in 8 days and was discharged to home.

RESULTS AND DISCUSSION

Stevens-Johnson Syndrome and its severe form toxic epidermal necrolysis (TEN) are idiosyncratic, delayed hypersensitivity inflammatory cutaneous adverse drug reactions that are associated with increased morbidity, mortality or increased hospitalization. Pathogenesis of SJS/TEN is believed to be immune mediated.³ But 95% of the reactions are due to drugs.⁴ As previously mentioned most common groups are antimicrobials and NSAIDs. Differential diagnosis includes Erythema multiforme major, fixed bullous drug reaction, staphylococcal scalded skin syndrome. Diagnosis relies mainly on the clinical signs, temporal association with drug intake and histological findings. Then patients are put in a certain category of reaction on the extent of body surface area (BSA) involvement (>30% BSA in TEN, 10-30% in SJS/TEN overlap and <10% in SJS). Obviously SJS-TEN would add to patient's burden of treatment. Treatment is mainly supportive and survival depends upon quick withdrawal of offending drugs. In our case as the

patient received multiple drugs including paracetamol, phenylephrine, chlorpheniramine, amoxicillin and levocetirizine. Paracetamol is a widely used drug and is used rampantly as an OTC medication since patients take it for common condition like fever. Here also the patient took preparation that contains paracetamol without prescription. This self medication is a major problem in our state of affairs due to lack of awareness among public. The causality assessment was done as per the Naranjo algorithm.⁵ and WHO-UMC criteria⁶. Rechallenge test can not be done in this case as it was unethical for SJS-TEN. Among the medications taken by the patient Paracetamol⁷ and Amoxicillin-clavulanate⁸ could cause the reaction. We could not find any conclusive literature regarding the involvement of other drugs in causing SJS or TEN. According to Naranjo algorithm the causative agents found to be in Possible category (point-4). In WHO-UMC scale causality assessment is also attributed to possible category since there are multiple drugs causing the reaction and dechallenge test is positive. Another important point to be noted here is that when the patient presented with initial symptoms of SJS/TEN i.e erythematous lesions with fluid filled vacuoles and already on paracetamol medication, again he was prescribed with paracetamol and amoxicillin which aggravated the condition. So this shows unawareness regarding the drug reaction among public as well as physicians. So the health professionals and the patients should be educated on early suspicion of drug reactions. In future this will prevent the occurrence of serious reactions and also help in clinical decision making.

CONCLUSION

Though there are many differential diagnosis, our case was diagnosed as SJS-TEN on the basis of drug history, clinical features, distribution of lesions. From this case it is evident that there should be awareness programmes on drug reactions and physicians as well as patients should be educated on early suspicion of adverse drug reaction.

REFERENCES

1. Jaykare S, Motghare V, Patil J, Pise H. Nimesulide induced Stevens Johnson syndrome: a case report. *Indian J Med Case Rep* 2012; 1:1-3.
2. Chan HL, Stern RS, Arndt KA, Langlois J, Jick SS, Jick H, et al. The incidence of erythema multiforme, Stevens-Johnson syndrome, and toxic epidermal necrolysis. A population-based study with particular reference to reactions caused by drugs among outpatients. *Arch Dermatol* 1990; 126:43-7.
3. Bernard Yu-Hor Thong. Stevens-Johnson syndrome / toxic epidermal necrolysis: an Asia-Pacific perspective. *Asia Pac Allergy*. 2013; 3:215-23.

4. Sharma VK, Sethuraman G. Adverse cutaneous reactions to drugs: An overview. *J Postgrad Med* 1996; 42:15-22.
5. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, et al. A method for estimating the probability of adverse drug reactions. *Clin Pharmacol Ther.*1981; 30: 239–45.
6. The use of the WHO-UMC system for standardized case causality assessment. Available from: <http://www.WHO-UMC.org/graphics/4409.pdf>. (Last accessed on 2013 Dec 30).
7. Halevi A, Ben-Amitai D, Garty BZ. Toxic epidermal necrolysis associated with acetaminophen ingestion. *Ann Pharmacother*2000; 34: 32–4.
8. Neila Fathallah, Zayani Hanen, Raoudha Slim, Lobna Boussofara, Ghariani Najet, Kamel Bouraoui et al. Co-amoxiclav-induced Stevens Johnson Syndrome in a child. *Pan Afr Med J.* 2013; 14: 38.

AJPTR is

- Peer-reviewed
- bimonthly
- Rapid publication

Submit your manuscript at: editor@ajptr.com

