Advances in Bioresearch
Adv. Biores., Vol 14 (5) September 2023: 425-427

Print ISSN 0976-4585; Online ISSN 2277-1573
Journal's URL:http://www.soeagra.com/abr.html
CODEN: ABRDC3
DOI: 10.15515/abr.0976-4585.14.5.425427

Advances in Bioresearch

CASE REPORT

Aceclofenac induced Stevens Johnson Syndrome: A case report

Sanatkumar B Nyamagoud[1]*, Anchu S P[1], Jaison M Johnson[1], AHMV Swamy[1]
[1]Department of Pharmacy Practice, KLE College of Pharmacy, Vidyanagar, Hubballi. A Constitute Unit of KLE Academy of Higher Education and Research, Belgavi, Karnataka. India.
Corresponding Author's E-mail: dr.sanathnyamagoud@gmail.com

ABSTRACT
Stevens Johnson Syndrome is known as an acute, rare immune complex mediated hypersensitivity reaction of skin and mucous membranes which usually occurs in association with use of certain medications. Aceclofenac is classified under NSAIDS are rare medications known to cause SJS. This report describes the case of a23 year old male patient who prescribed with Aceclofenac 100 mg tablets for dental pain with swelling. After consuming2 doses of drug patient developed painful red lesions in oral cavity, mildly itchy red lesions over both upper and lower limbs, chest, trunk and genitals and he also developed fever for 2 days. Based on physical and laboratory findings the patient was diagnosed with Aceclofenac induced Steven Johnson Syndrome with an ALDEN criteria score of '5' and WHO Uppsala Monitoring Centre Causality Assessment Criteria scored 'probable' association of ADR with Aceclofenac. The patient was treated with intravenous dexamethasone and cyclosporine. This case report point out the rare and serious adverse reactions associated with commonly prescribed drugs and its impact on health care system. This report aims to aware clinicians as well as patients about the occurrence of SJS with the intake of Aceclofenac.
Keywords: *Stevens Johnson Syndrome, Aceclofenac, NSAIDS, Adverse drug reaction*

Received 11.08.2023 Revised 21.09.2023 Accepted 25.10.2023

How to cite this article:
Sanatkumar B N, Anchu S P, Jaison M J, AHMV Swamy. Aceclofenac induced Stevens Johnson Syndrome: A case report. Adv. Biores. Vol 14 [5] September. 2023. 425-427.

INTRODUCTION

Aceclofenac is a non-steroidal anti-inflammatory drug which is extensively prescribed for subsiding the musculoskeletal pain and inflammation inarthritis, traumatic and degenerative injuries. It can be classified as a preferential cyclooxygenase-2 inhibitor thereby reducing inflammatory cytokines such as prostaglandin E2, TNF and interleukin -1 production [1]. Generally, Aceclofenac can be used safely in adults with some mild and amendablegastro-intestinal adverse events. Other noticeable ADRs are skin rashes, drowsiness and abdominal pain.

Stevens-Johnson Syndrome (SJS) is a rare bullous cutaneous diseases considered as a life-threatening condition which is immune-mediated reactions to drugs identified by epidermal necrosis, erosion of mucous membranes and substantial detachment of the epidermis [2]. According to global data it is observed that SJS affects 1-6/million people in a year. Over 50% cases of SJS is precipitated by certain drugs (95% in case of TEN). Drugs which can cause SJS include penicillin antibiotics and sulfa antibiotics, valproic acid, carbamazepine, barbiturates, lamotrigine, NSAIDs, etanercept, mirtazapine, adalimumab etc [3].

CASE REPORT

A 23 year old male patient reported to department of Dermatology on 22nd February with chief complaints of painful red lesions in oral cavity since 2 days. Patient complaints of mildly itchy red lesions present over both upper and lower limbs, chest, trunk and genitals and he also developed fever since 2 days back. Patient provides history of taking aceclofenac tablets (100 mg twice daily for a day prior to the onset of lesions) for dental pain with swelling prescription obtained from dental clinic. Prior to the 2nd dose of Aceclofenac he noticed painful lesions on oral cavity then the lesions gradually progressed to upper and lower limbs, chest, trunk and genitals and visited hospital. The patient had no history of similar complaints in the past. Physical examination revealed patient was febrile (100°F). Oral examination indicated the presence of

multiple well ill demarcated erythematous erosion s with crusting and white plaques present over upper and lower lip mucosa, right and left buccal mucosa, tongue, soft and hard palate and floor of mouth. Multiple erythematous macules and patches were present on palms and soles. Multiple discrete to coalescing erythematous targetoid plaques present over face, both upper limb and lower limbs, chest, trunk [Figure: 1] and erythematous erosions were present on genital area. The Nikolsky sign is found to be positive. Punch biopsy was done to confirm the diagnosis and get rid of other possible cause. The patient was diagnosed with SJS (Stevens Johnson Syndrome). The severity of the condition is calculated using ALDEN score (score is 5) and patient had a probable relation with the drug. Patient was treated with intravenous corticosteroids (dexamethasone 8mg), oral immunosuppressant (cyclosporine 100mg for 13 days), antihistamines (chlorpheneramine maleate 4 mg), Pregabaline (75 mg), fluid resuscitation with normal saline, multivitamins, povidone iodine gargle, for pain relief mucopain gel, triamcinolone gel and calamine lotion. ENT opinion was taken for the compliant of bilateral nasal obstruction and was advised to provide saline nasal drops and syrup mucaine gel 10ml 3 times a day. After 21 days of stay patient was discharged. The relation between intake of aceclofenac and occurrence of SJS suggests that it might be an ADR secondary to aceclofenac intake. WHO Upssala Monitoring Centre Causality Assessment Criteria scored 'probable' association of ADR with Aceclofenac. Naranjo ADR scale also suggested a score of 6 i.e, 'probable' between the event.

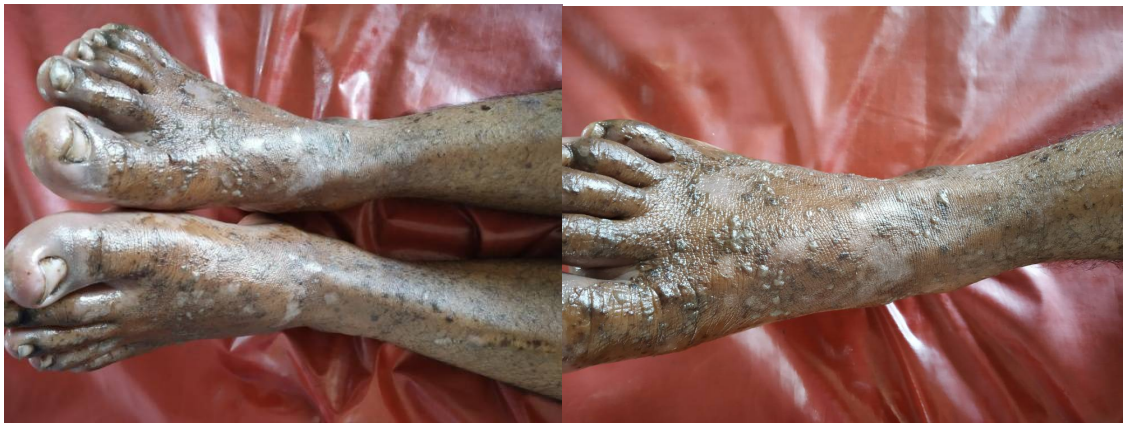

Figure: 1 Multiple well ill demarcated erythematous macules, patches and painful lesions over the legs and soles of foot.

DISCUSSION

Stevens-Johnson syndrome (SJS) is a rare, serious disorder of the skin and mucous membranes. It's usually a reaction to medication that starts with flu-like symptoms, followed by a painful rash that spreads and blisters. There are four causative categories which includes; drug-induced, infectious, malignancy-related and idiopathic [1].

Based on severity SJS/TEN classified into Stevens -Johnson syndrome (mild) has 90% of mucous membrane complicity, Toxic epidermal necrosis (severe) which has 30 % of BSA complicity, unreasonable mortality and nearly all patients will come up with mucous membrane complicity and in case of SJS/TEN overlap state epidermal detachment lies between 10-30% [4].

The exact ethiology of NSAIDS induced SJS/TEN is not clearly known. It is hypothesized that since NSAIDS tends to cause liver injury, damaged liver releases toxic retinoid compounds to circulation causing granular globulin mediated cell apoptosis and eventually manifesting as SJS/TEN [5]. NSAIDS can also induce keratinocytes which expresses CD95 receptor and its ligand (Fas L), thus increasing release of TNF-α, perforin and granzyme B, eventually leading to cell necrosis. CD8+ T cells mediated keratinocyte apoptosis is observed to result in blister formation and has found in blister fluids.

SJS is primarily characterized by non-specific symptoms such as fever and malaise and sometimes with upper respiratory tract infection. Blistering rash and erosions which are erythematous, targetoid, annular or purpuric appears over face, trunk, limbs and mucosal surfaces except scalp [6].

Management of Drug induced SJS:

According to SCORTEN the mortality rates of SJS measured as 1-5%. And the common causes of death include pulmonary failure, sepsis and multiple organ failure. The management of SJS could be as follows:

1. Prompt withdrawal of the causative/ suspected drug as soon as possible.

2. Initial assessment of ethiology, evidence of septicaemia, involvement of body surface area, involvement of mucous membrane.
3. Periodic monitoring of vital signs, urinary output, fluid intake, serum electrolytes, kidney function test etc.
4. Supportive therapy includes: Temperature control, Start antibiotics if sepsis present (for gram positive amoxicillin+clavulonic acid/vancomycin/clindamycin/teicoplanin/linezolid, for gram negative: amikacin/piperacillin+tazobactum/cefoperazone+sulbactum), Fluid and electrolyte balance (ringer lactate or saline solutions), regular cleaning and dressing of wounds, oral care with mouth washes and lubricants for lips, ophthalmic care with lubrication and antibiotic eye drops/ointments with or without corticosteroids and psychological care is also advised. Respiratory care should be given in case of pulmonary involvement and includes normal saline aerosols, bronchial aspiration and postural drainage.
5. Disease modifying therapy: it includes various immunomodulating agents such as systemic corticosteroids (prednisolone 1–2 mg/kg/day, dexamethasone 8–16 mg/day iv/im or methylprednisolone dosage tapering should be done after 7-10 days. Cyclosporine 3–5 mg/kg/day for 10–14 days. If both steroids and cyclosporine are used, steroids can be tapered even more quickly (2–3 days) and cyclosporine (3–5 mg/kg/day) can be continued for 7–10 days. plasmapheresis, Intravenous immunoglobins, tumor necrosis factor-α inhibitors, N-acetylcysteine, granulocyte colony-stimulating factor, cyclophosphamide, etanercept, infliximab and pentoxifylline are also used.
6. Preventive measures: To prevent reoccurrence the patients and their first-degree relatives should avoid taking the causative agent or similar compounds since they are inadequately detoxifying its reactive metabolites.[8]

For this patient intravenous corticosteroid together with oral immune suppressants (cyclosporin 100mg) was given. Steroid was tapered within 5 days after the initiation of therapy. The disease progression is stopped within 3 days and reepithelization was completed in 18 days. The patient got discharged after 21 days of hospital stay.

Conclusion:

NSAIDS are dispensed extensively as anti-inflammatory and as analgesics with or without prescription. Most of the time patients are unaware about the serious ADRs underlying behind these drugs thus resulting in unnecessary hospital stay of patient. This case report emphasizes the importance of patient education on possible adverse events of NSAIDS and advises the Clinicians to take proper history of patient before prescribing Aceclofenac.

REFERENCES

1. Hasan, R., Abidi, A., Ahmad, A., Saxena, K., Rizvi, A., & Thadani, A. (2017). Aceclofenac Induced Stevens Johnson Syndrome: A Rare Case Report. **Era's j. med. Res**, 4(1): 76-79.
2. Angadi, S. S., and Karn, A. (2016). Ibuprofen induced Stevens-Johnson syndrome - toxic epidermal necrolysis in Nepal. Asia Pacific allergy, 6(1): 70–73.
3. Kaimal S, Lobo C, Narayan G. (2023). Augustine M. Stevens-Johnson syndrome and toxic epidermal necrolysis: A fresh look at an old foe. Indian J Dermatol, 68(1): 34-40.
4. Nooru Ameen KH, Pinninti R, Jami S. Aceclofenac induced Stevens-Johnson/toxic epidermal necrolysis overlap syndrome. (2013) Journal of Pharmacology and Pharmacotherapeutics, 4(1):69-71.
5. Shao QH, Yin XD, Zeng N, Zhou ZX, Mao XY, Zhu Y, Zhao B, Li ZL (2022). Stevens-Johnson Syndrome Following Non-steroidal Anti-inflammatory Drugs: A Real-World Analysis of Post-marketing Surveillance Data. Front Pediatr, 10(1):1-7.
6. P, Chandaluri & M, Prabhanjan. (2018). Steven Johnson Syndrome: Adverse Drug Reaction. J Gen Pract (Los Angel), 6(1):349-50.
7. Atmik Singh, Shraddha Pore, Asha Khade. (2022). Aceclofenac Induced Toxic Epidermal Necrolysis: A Rare Case Report. Authorea, 1-6. DOI: 10.22541/au.165399843.38248327/v1.
8. Gupta LK, Martin AM, Agarwal N, D'Souza P, Das S, Kumar R, Pande S, Das NK, Kumaresan M, Kumar P, Garg A, Singh S. (2016). Guidelines for the management of Stevens-Johnson syndrome/toxic epidermal necrolysis: An Indian perspective. Indian J Dermatol Venereol Leprol, 82(6):603-625.