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Case Report on Paracetamol induced Stevens Johnsons Syndrome

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ABSTRACT

The primary paradigm of healthcare in the modern era is drug use. The most common medication for pain and fever is Paracetamol. Even though paracetamol adverse effects are uncommon in India, they occasionally can result in conditions that are fatal. Unfavorable medication reactions like Stevens-Johnson syndrome (SJS) have the potential to be fatal. There are only very few reports regarding paracetamol induced SJS. We describe a case of SJS that was brought on by the use of paracetamol. The clinical features and medical management of the patient was briefly described.

INTRODUCTION

Stevens-Johnson syndrome (SJS) is a severe allergic reaction caused by medications that causes skin tissue to die (necrosis) and detach.[1] It can happen as a result of an adverse hypersensitive reaction to medications, which can cause potentially lethal skin and mucosal eruptions.[2]

Major symptoms include abnormal blistering of the skin, acantholysis, diarrhea, erythema, fatigue, macule, weight loss, abnormality of neutrophils etc. [1] The skin starts to blister and peel, creating erosions, which are extremely painful raw patches that mimic a severe hot-water burn. Before spreading to other parts of the body, skin erosions typically start on the face and chest.

SJS is a rare condition that affects 1 to 2 people per million annually. Although the cause of the elevated risk is unknown, immune system variables and exposure to numerous drugs involved such as Anticonvulsants (Carbamazepine, Lamotrigine and Phenytoin), Oxide inhibitors (Allopurinol), Antibacterial (Sulfonamides), Non-nucleoside reverse transcriptase inhibitors (Nevirapine), Non-steroidal anti-inflammatory drugs (Paracetamol, and Oxicams) are the medications most frequently linked to SJS. SJS can also be caused by other things.[3] Due to the affordability and accessibility, Paracetamol is one of the most commonly used analgesics and antipyretics.[4]

CASE REPORT

An 83 year old male patient was admitted in the General Medicine department with the affliction of skin peeling for the last five days. He had the medication history of Paracetamol (Acetaminophen) consumption five days back as an over the counter (OTC) drug. He consumed the same for the management of fever with one week history. After the gulping of four tablets, the patient had developed skin peeling from head to toe, and

admitted to the hospital for further management. Patient had a medical history of hypertension, dementia and history of multiple drug allergies too. Five years back, patient showed allergic to paracetamol, tramadol and dubious to metronidazole, pethidine in drug allergy test.Patient's caretaker was unaware about the drug allergy and gave Paracetamol to the patient for subsiding the fever. After the 3 days administration of Paracetamol, the fluid filled lesions were developed, followed by skin peeling over dorsal aspect of both hands and limbs, upper arm and bilateral cheeks (figure 1a, 1b, 1c, 1d)

The patient was treated under the combined supervision of General Medicine and Dermatology experts and it was diagnosed as drug induced SJS.

For the management of SJS Inj. Dexamethasone (4mg TDS later tapered to 4mg BD then changed to 4mg OD), Inj. Pheniramine (22.75 mg BD) and Inj.Cefoperazone + Sulbactam was given as intravenous injection; Bilastine (20mg BD) and Betamethasone (1500 mcg HS) was given as tablet per orally; For local application Mupirocin and Fucibet (betamethasone+fusidic acid) cream was given.

DISCUSSION

SJS is a type IV hypersensitivity reaction in which a substance or its metabolite induces cytotoxic T cells (CD8+ T cells) and T helper cells (CD4+ T cells) to start autoimmune responses that target self-tissues. In particular, it is a type IV, subtype IVc, delayed hypersensitivity reaction that is partially reliant on the cellular damage that natural killer cells cause to tissue. [5] Although various causes, including as drug-induced infections, malignant illnesses, and transplant rejection, have been suggested as SJS risk factors, the majority of them were brought on by drug side effects. Nonsteroidal anti-inflammatory medicines (NSAIDs), Antipsychotics, Antibiotics, Allopurinol, and Anticonvulsants are the most common drugs responsible for drug induced SJS. [6] In our case drug induced SJS occurred due to the

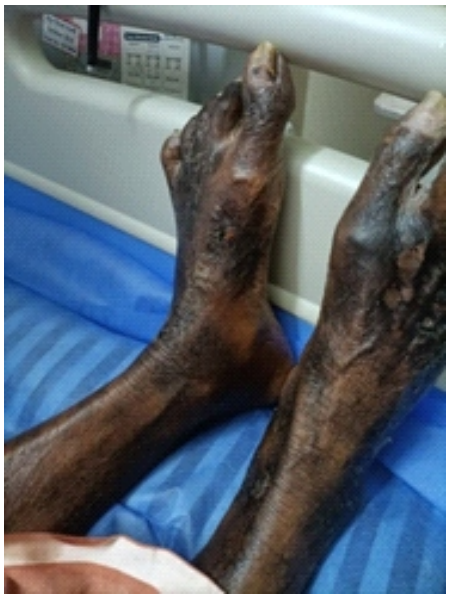

Fig. 1a

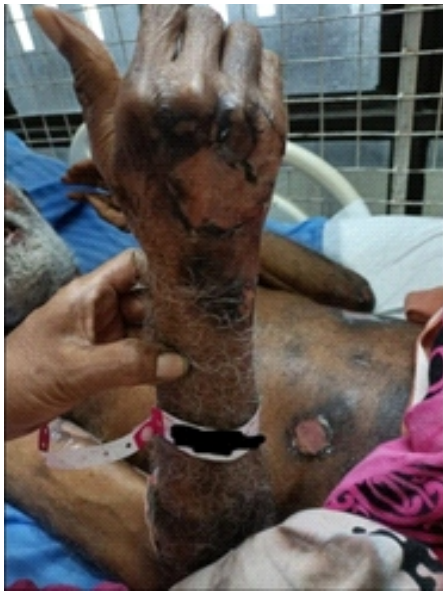

Fig. 1b

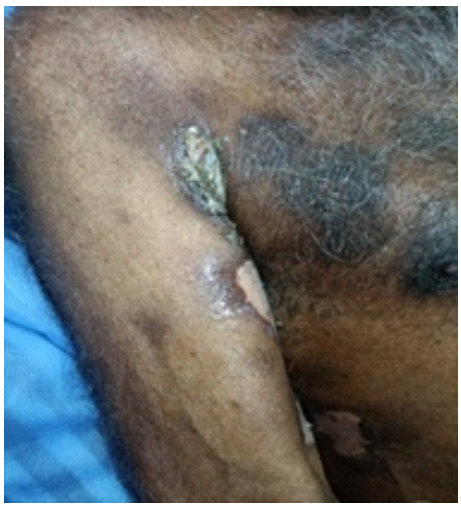

Fig. 1c

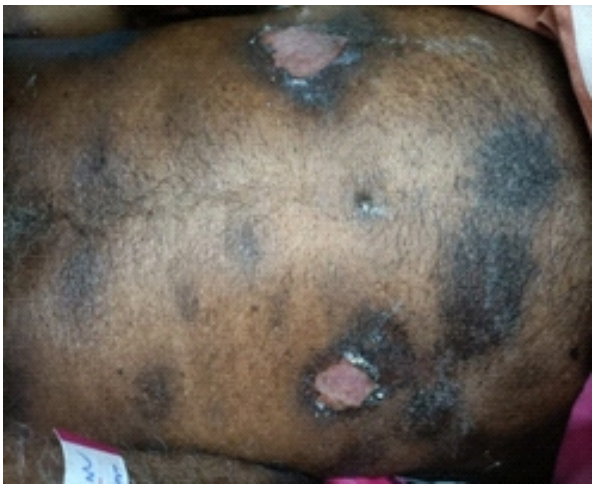

Fig. 1d

consumption of Paracetamol tablet.

Fever, sore throat, and exhaustion are typically the first symptoms of SJS, which are frequently misunderstood and treated with antibiotics. Fever, sore throat, cough, and burning eyes for one to three days are frequently signs of SJS. At the beginning of the condition, patients with these disorders usually experience burning agony in their skin. [7] On the face, trunk, arms, legs, and soles of the feet, but typically not the scalp, a rash of round lesions appears. [8] Here burning agony occurred in the skin and several lesions where formed all over the body. Following that patient developed skin peeling over dorsal aspect of both hands, upper arm, both limbs and bilateral cheeks.

Diagnosis can be done using medical history, physical examination and laboratory tests. [1] Raised sedimentation rate (ESR), hypoalbuminemia, elevated liver enzyme levels, microscopic hematuria, and mild leukocytosis are examples of abnormal laboratory findings. Only in cases where the diagnosis is unclear is a skin biopsy recommended. A mononuclear perivascular cell infiltrate in the dermis, basal layer edema, sub epidermal blister development, and epidermal cell necrosis are among the histopathological findings. Upon diagnosis, all potentially harmful medications should be immediately stopped. [8] Diagnosis of our patient was done through medical history, physical examination and abnormal laboratory findings. Patient's Urea, Creatinine, ESR and C-reactive protein (CRP) was found to be elevated. By the proper management of the condition the laboratory findings came to normal at the time of discharge.

The use of non-adherent protective coverings for skin lesions as well as isolation, fluid and electrolyte balance, nutritional assistance, eye and mouth care, and pain treatment are the supportive measures. [9] There is no effective and widely acknowledged treatment for SJS other than good supportive care. Prophylactic antibiotics are not advised, even if sepsis prophylaxis and early treatment are suggested.[8] It is debatable how corticosteroids should be used to treat SJS. Despite the fact that past retrospective research claimed that children with SJS who received corticosteroid treatment had longer hospital stays and a higher frequency of complications, [10] while other studies showed that early and fast therapy with high-dose corticosteroids had a remarkable success rate. [11] First step in the management include withdrawal of the offending drug and maintenance of body fluids and supportive care. In our case maintenance of body fluids was done by the administration of Ringer lactate, normal saline and supportive care was given. Administration of corticosteroids along with antibiotics and antihistamines showed considerable improvement in the patient's condition. The lesions began to heal from the second day of administration of drugs. Injection Dexamethasone was given three times daily at a dose of 4mg for the first 7 days. For the next 7 days the dose of dexamethasone was tapered to twice daily. And for the next 7 days the dose of dexamethasone was tapered to once daily.

Hartwig and Seigel severity assessment scale for our case was found to be level 5, i.e., severe. Schumock and Thornton citeria for preventability scale shows preventable. Naranjo adverse drug reaction probability scale shows 10 i.e., a definite ADR.

CONCLUSION

From this case report it is evident that severe hypersensitivity reactions may occur with the consumption of NSAIDs. Proper medical care should be given to the patient under the supervision of medical practitioners. Medical practitioners should be aware about the adverse effects of drugs and give proper awareness to the patients.

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CONFLICTS OF INTEREST

The authors have the required patient consent forms, on which the patients have agreed to participate in the study and be represented in the corresponding publication. Although the patients are aware that the writers would take precautions to keep their names secret, anonymity cannot be guaranteed.

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