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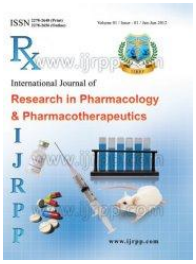

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Case Report Open Access

Paracetamol is capable to cause Steven Johnson Syndrome: a case report

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ABSTRACT

Steven-Johnson syndrome (SJS) is a rare and a severe form of Erythema Multiforme (EM). SJS is most commonly caused by drugs which results in skin and mucosal eruptions that can be potentially fatal. Paracetamol (PCM) is extensively used over the counter drug. In August 2013, the US Food and Drug Administration (FDA) informed that PCM had been associated with a rare risk of SJS. While PCM induced adverse drug reaction is rare in India, very few detailed reports of SJS due to the use of PCM has been published. This case report inform the fact that severe hypersensitivity reactions like SJS can occur due to ingestion of tablet PCM, which can be possibly dangerous and life-threatening. The clinical features, detail of the patient and management are described in brief.

Keywords: Steven Johnson syndrome, Paracetamol, Adverse drug reaction.

INTRODUCTION

Stevens Johnson Syndrome (SJS) is a rare, potentially fatal hypersensitivity reactions and serious disorder of skin and mucous membranes. SJS is named for Albert Mason Stevens and Frank Chambliss Johnson, American pediatricians who both published a report of the disorder in the *American Journal of Diseases of Children* in 1922. [1] According to the involvement of body surface area (BSA), the disease can be categorized into SJS (<10% BSA), SJS– Toxic epidermal necrolysis (TEN) overlap (10%–30% BSA) and TEN (>30% BSA). This shows that severity and a worsening of disease prognosis is upswing with increase percentage of skin involvement.[2] Usually SJS is a disorder of the immune system but more than 80% of SJS cases are related to ingestion of drugs. [3] A very few case reports of SJS are reported due to the consumption of Paracetamol. We briefly described a rare case report of SJS due to ingestion of Tablet Paracetamol.

CASE REPORT

A 69 year old female patient (figure 1) referred from primary health center, Garacharma to casualty of G.B. Pant hospital, a teaching hospital, Port Blair, Andaman and Nicobar Island with chief complains of high grade fever, rash and erythematous purpuric

macular lesions involving back, neck, both the forearm, both the eyes leading to difficulty in opening of eyes since 2 days. On 04/01/2020, patient had fever and she took tablet Paracetamol 500 mg by herself. After taking 3 doses of Paracetamol, she had developed cutaneous reactions. On 06/01/2020, the patient's relatives transferred her to Port Blair. She was conscious, apprehensive, co-operative and well oriented to time, place and person. After her clinical examination, clinician diagnosed it as case of Paracetamol induced Steven Johnson syndrome. Patient was prescribed Inj. Cefotaxime 1 gm BD, Inj. Dexamethasone 1 cc IV, Fusidic acid cream for local application twice daily and Tab. Pantoprazole 40 mg OD. On the same day, patient was referred to the Ophthalmology department for consultation. For symptomatic relief, she was prescribed Moxifloxacin eye drop, Azithromycin eye drop, Carboxymethylcellulose sodium eye drop and Mupirocin cream. Her medical history revealed that 5 year back she had similar experience with some unknown drug. At the time of admission, her temperature was 99 degree, pulse was 110/minute, respiratory rate was 22/ minute, blood pressure was 130/90 mmHg and her random blood sugar level was 143mg/dl. Lab investigations showed Hb 11.6 gm %, WBC 6010 cells/cu.mm with differential being 81% polymorphs, 17% lymphocytes, 1% monocytes and 1% eosinophil. Liver function tests and renal function tests were normal. The cardiovascular, abdominal, respiratory and nervous system examination was totally normal. She was known case of type 2 diabetes mellitus and hypertension and was taking tablet Metformin 500 mg BD and tablet Amlodipine 5 mg respectively. She was given symptomatic treatment to which she responded very well. She was discharged after 15 days of treatment with satisfactory condition. (figure 2).

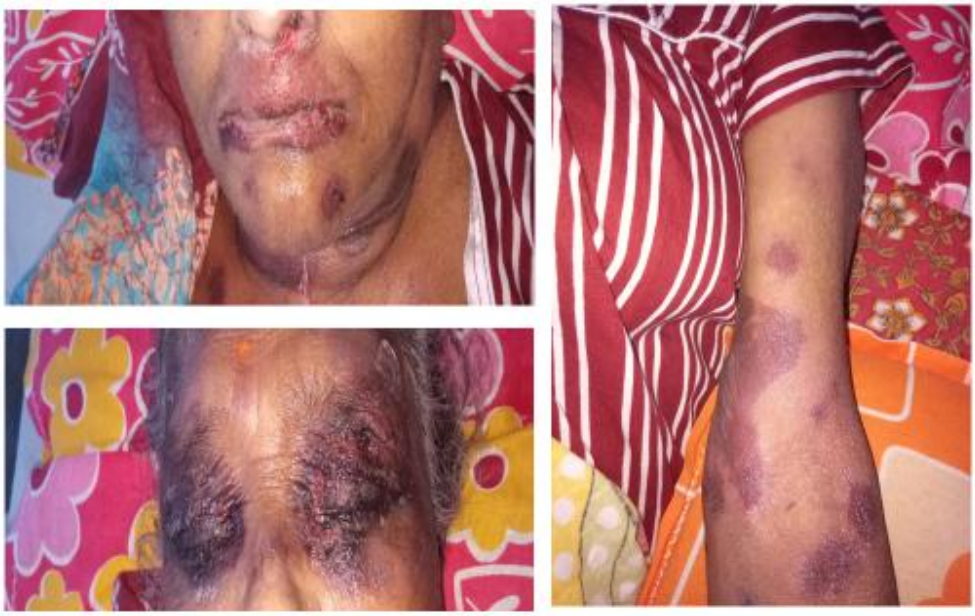

Figure: 1 Erythematous purpuric macular lesions involving both the eyes, lip and forearm.

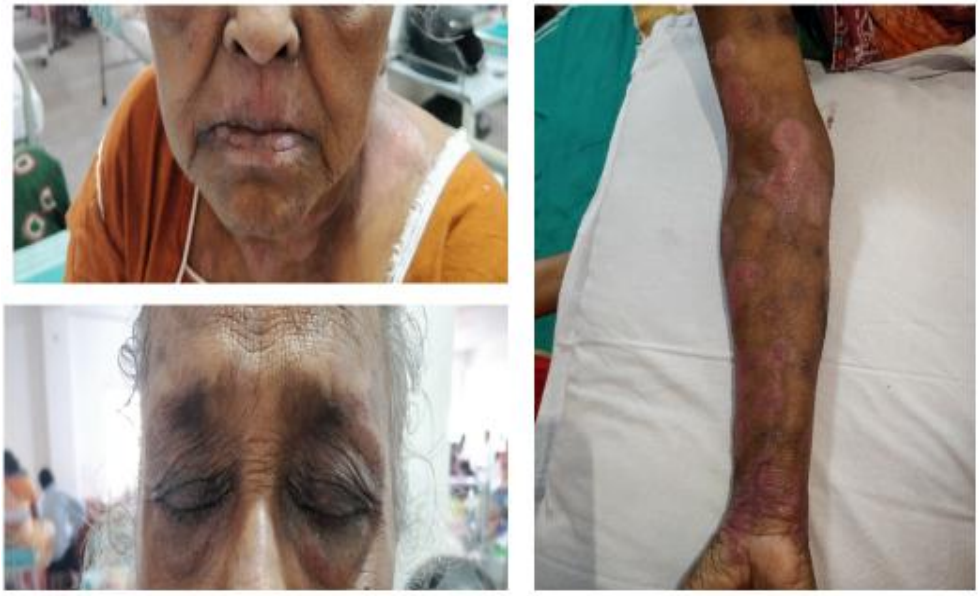

Figure: 2 Healed lesions around both eyes, lip and forearm.

DISCUSSION

Adverse drug reactions (ADRs) are one of the leading causes of death among hospitalized patients. These may vary from mild rashes to severe reactions such as SJS. 5 to 8% hospitalized patient experience with serious ADRs. [4] SJS incidence is 1-6 cases per million person. [2] Many factors have been anticipated as risk factors of SJS including previous history of SJS, drug-induced, infections, malignant disorders and graft rejection. [5] In our case, patient had a history of SJS with some unknown drug. So previous history of SJS may be the anticipated risk factor to this patient. Again the risk is higher for older, female and initiating treatment with Non-steroidal Anti-inflammatory drugs. [1] Majority of high risk factors of SJS are found to be associated with our patient. Prodromal symptoms are perceived in 30% of cases. Symptoms may possibly start within 1–3 weeks of starting a new drug and it last for 1–2 weeks. [5] SJS begins with flu-like symptoms, followed by a painful red or purplish rash that spreads and form blisters. Then the top stratum of the affected skin dies, sheds and heals. [3] In our case patient had developed symptoms within 2 days and last for almost 2 week. In our study, patient had high grade fever, rash and erythematous purpuric macular lesions involving back, neck, both the forearm, both the eye leading to difficulty in opening. Similar features were reported in NS Neki et al. [6] study except oral mucosal ulcerations. Most common group of the drugs which are allied to cause SJS are Fluoroquinolones, Sulpha drugs, Anti-tubercular drugs, Penicillin, Anti-retro viral drugs and Cephalosporin. [7] Paracetamol is widely used analgesic and anti-pyretic because of its easy accessibility and cost-effectiveness. Hepatoxicity with large doses of Paracetamol is well-known side effect while it is very rarely concerned to be a culprit of Steven- Johnson syndrome. Publications from 1995 to 2011 describing SJS in Indian population were studied by Patel *et al*. [4] Data from PubMed, Medline, Embase and UK PubMed Central Electronic Databases showed 6.17% of cases of SJS were due to the Paracetamol. In recent years many authors reported case reports related to Paracetamol induced SJS. [5, 6, 8, 9] Our index case report also add strong evidence along with this publication that therapeutic dose of Paracetamol have a potential to cause unpredictable serious adverse reaction like SJS. In present case, first step in the management was an immediate withdrawal of the offending agent followed by supportive care. After 2 weeks she completely recovered and was discharged. (figure 2) WHO -UMC causality assessment system in our cases was probable.

CONCLUSION

This case highlights the fact that irrespective of being a safe drug, Paracetamol is capable of causing Steven Johnson Syndrome which could be possibly dangerous and life threatening to patient. Health care professionals should always be more alert while prescribing the potentially safe drugs and with this alertness health care professionals can avoid hospital admissions, reduce economic burden and improve health related quality of life.

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