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# A Case Study of Cefuroxime/Oxcarbazepine Induced Stevens - Johnson Syndrome

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***Background***

*Any prescribed medication for any patient can cause adverse effects which sometimes can be life threatening. So, responsibility lies on the health care professionals to be cautious while prescribing for their patients[1]. They must be asked for history of any drug allergies and instruct them to report immediately if any side effects occur. This is particularly important for a few categories of drugs like NSAIDs, antibiotics like penicillin's, cephalosporin's, and anticonvulsants like diphenylhydantoin and carbamazepine. These are well known to cause severe drug reactions like Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN).[2,3] SJS and TEN is a potentially fatal condition that can manifest with severe skin and mucosal reaction. It also involves other sites of mucosal involvement like in the eyes and vaginal mucosa. There are no strict guidelines available for treating SJS or TEN. Use of steroidal agents to treat these conditions is still a controversy.[4] According to the epidemiological studies published, the average mortality rate for SJS was estimated to be about 1-5% and TEN to be about 25-35%.[5,6,7] Superimposed infections and severe mucosal involvement are more often associated with higher mortality. Therefore, isolating the patient to an aseptic area could be the primary step for managing these conditions along with good nursing, which can reduce the open skin lesion infection and can contribute to a fast recovery.*

**CASE REPORT**

A 33 yr old female patient was presented to the emergency department with complaints of worsening maculopapular rashes all over the body (face, chest, abdomen, back and limbs). Lesions were also seen on her oral cavity, throat and genital. She was complaining of severe pain in her throat and difficulty in opening her mouth. These symptoms clearly indicated SJS. Past medical history revealed that she is a known case of micro adenoma pituitary and vertiginous epilepsy, for which tablet oxcarbamazepine and tablet clobazam were prescribed since 12 days. Present history says that, the patient was suffering from upper respiratory tract infections for which she had gone to a local doctor, where she was advised to take tablet cefuroxime, tablet paracetamol, and tablet diclofenac sodium. On examination, she was found to be conscious and oriented, her vital signs were normal. Conjunctival congestion was present. Her hematological report showed mild decrease in hemoglobin and packed cell volume (PCV). Peripheral blood smear reported normocytic normochromic blood picture with relative neutrophilia. Elevated erythrocyte sedimentation rate (ESR) was also seen. Her urine report showed presence of epithelial cells and pus cells. Microbiological report confirmed the presence of colonies of klebsiella. The presumptive cause of SJS could have been cefuroxime, paracetamol, diclofenac, oxcarbamazepine or clobazam. Past medication history revealed that patient was exposed earlier to paracetamol and diclofenac and had no signs of SJS or any other drug reactions on previous exposures. The reaction was assessed by using WHO and Naranjo scale. Literature search was also done to know the incidence of SJS caused by each drug to which the patient was exposed. The search could not support any evidence of SJS caused by tablet clobazam. Therefore, tablet clobazam was rechallenged to rule it out as a causative agent to cause SJS. After the drug was rechallenged, her SJS didn't worsen. So, tab. clobazam was reintroduced into her prescription. This suggested that the possible drug responsible was cefuroxime or oxcarbamazepine. The patient's treatment included antibiotics, corticosteroids and other symptomatic treatments. Empirical therapy was initiated with 100 mg of I.V netilmycin followed by 100 ml of I.V metronidazole on the first day. Along with these, 4mg of I.V betamethasone, 40 mg of pantoprazole, 4 mg of I.V Ondansetron and 50 mg I.V tramadol were given for her

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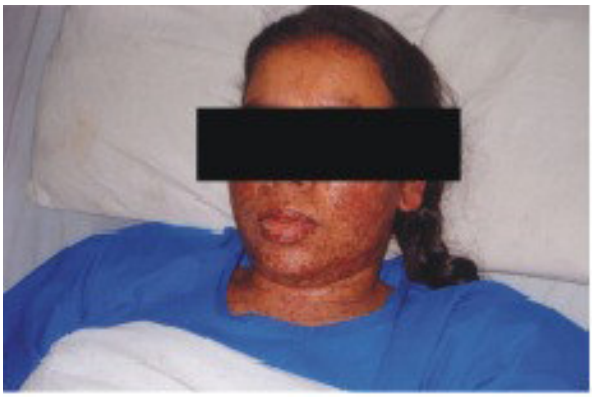
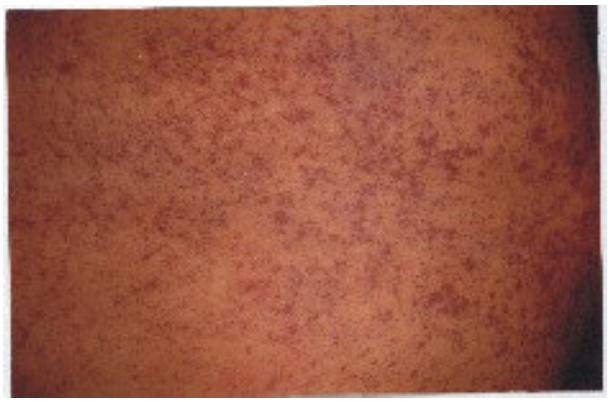
other symptomatic complaints. IV fluids were also supplemented as patient was unable to take orally and was advised to be nil per oral. The infection caused by the skin lesions were treated with metronidazole gel twice daily and triamcinolone oral paste was advised for replacement therapy in adrenal insufficiency for her last medical condition. Mixture of hydroxypropyl methylcellulose (0.7%) and saline (0.45%) was used as an ocular lubricant. Ciprofloxacin eye drops and 180 mg oral fexofenadine were additionally included on the second day, while tramadol and I.V fluids were stopped. On the remaining days, topical fluticasone cream, 10 mg of tab. clobazam, bisacodyl suppositories were advised, milk of magnesia and paracetamol were included whenever patient complained of heartburn and pain





On the seventh day, patient's condition improved and she was able to take the medication orally. So I.V pantoprazole was changed to tab pantoprazole and topical xylocaine was included to reduce the pain. The patient was closely monitored for 4 days in the medical intensive care unit (MICU), after which, when her lesions reduced in size and number and was stable, she was shifted to a private ward. She was discharged after a total of 7 days of hospital stay. She was advised to follow up with the ophthalmology and dermatology department as an outpatient for her ongoing complaint of conjunctival congestion and skin lesions in their respective departments.

**CONCLUSION**

Cephalosporins and oxcarbamazepine are well reported in literature for causing SJS. Therefore, cefuroxime and oxcarbazepine were not rechallenged to avoid further fatal reactions. This ADR was the cause for a prolonged hospitalization with considerable suffering and discomfort. Hence, patients must be educated as to possible cause of illness so that an accidental re-exposure respectively can be avoided to those patients prescribed with high risk groups of drugs causing SJS and TEN which can be fatal.

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