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**Case Report****Trimethoprim-sulfamethoxazole induced toxic epidermal necrolysis: a case report****Rama R. Bhosale<sup>1\*</sup>, Pradeep S. Bodke<sup>2</sup>, Abhishek V. Patil<sup>3</sup>, Shivaji H. Bhurke<sup>4</sup>**<sup>1</sup>Department of Pharmacology, Govt. Medical College, Kolhapur, District- Kolhapur, Maharashtra, India<sup>2</sup>Department of Psychiatry, Govt. Medical College, Latur, District- Latur, Maharashtra, India<sup>3</sup>Department of Skin and VD, Govt. Medical College, Kolhapur, Dist- Kolhapur, Maharashtra, India<sup>4</sup>Department of Medicine, B. J. Govt. Medical College, Pune, District- Pune, Maharashtra, India**Received:** 21 September 2013**Accepted:** 8 October 2013**\*Correspondence to:**

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**ABSTRACT**

Toxic epidermal necrolysis (TEN) is a rare but serious dermatological disorder commonly caused as an idiosyncratic reaction to drugs and the most common drugs implicated are antibiotics, anticonvulsants and non-steroidal anti-inflammatory drugs. Here, we report a case of trimethoprim-sulfamethoxazole induced TEN in a 26 years old female.

**Keywords:** Sulfamethoxazole, Trimethoprim, Toxic epidermal necrolysis

**INTRODUCTION**

Co-trimoxazole, a fixed dose combination of trimethoprim and sulfamethoxazole (T/S), is a commonly prescribed antibiotic for the management of several uncomplicated bacterial infections. But there has been some concern about its clinical use since it has been associated with both frequent mild allergic reactions and serious adverse effects. The most common and less serious adverse reactions include gastric upset, stomatitis, headache and skin rashes. Less common and serious adverse reactions include Stevens Johnson syndrome, exfoliative dermatitis, erythema multiforme, toxic epidermal necrolysis (TEN), bone marrow toxicity, thrombocytopenia and severe liver damage.<sup>1</sup> Here, we report a case of T/S induced TEN in a 26 years old female.

**CASE REPORT**

A 26-year-old woman came to outpatient department of skin with severe ulcerations involving whole face and cutaneous detachment all over the body. She consumed T/S double strength tablets (tablet Septran) and paracetamol tablets. Detailed history about these drugs was not available, but there was past history of drug reaction. Also there was no history of drug reaction due to paracetamol. On examination, she was conscious and afebrile; her vital parameters i.e. heart rate, blood pressure and respiratory rate were normal. On dermatological examination, there was involvement of about 60% total body surface area with skin necrosis and tenderness (Figure 1). There were ulcerations on oral and genital area. On ophthalmic examination, there was conjunctivitis with white discharge and erosions on eyelids.



**Figure 1: Trimethoprim-sulfamethoxazole induced toxic epidermal necrolysis.**

An offending drug T/S was withdrawn. A lady was immediately admitted and investigations were performed, meanwhile she was administered intravenous fluids, hydrocortisone and antibiotic. Wound care was taken by cleaning and applying topical antiseptic. The results of investigations were as follows: haemoglobin – 12.7 gm%, total leukocyte count – 5900, serum electrolytes, kidney function tests, liver function tests, ECG reports were within normal limits. No giant cells were seen in Tzanck smear and Nikolsky's sign was positive. Expert dermatologists diagnosed this case as a T/S induced TEN.

After 15 days, all the hematological, liver function and renal function tests were within normal limits. Chest radiograph revealed no abnormality. There was complete recovery after 28 days and no any disability found in next two-three follow ups.

## DISCUSSION

Cutaneous drug reactions are one of the most common manifestations of adverse drug reactions, affecting 2-3 percent of hospitalized patients. Some of the life threatening dermatological drug reactions includes Stevens Johnson syndrome, TEN and the overlap category of these two drug reactions. TEN is an uncommon but serious illness of skin and mucous membrane with systemic symptoms characterized by the presence of flat, atypical lesions and the epidermal detachment more than 30% of the total body surface area.<sup>2</sup> Though many factors such as

drugs, variety of infections and certain vaccines are involved in causation of TEN but the role of drugs is said to be the most important. Most common group of drugs that cause TEN are antibiotics, anticonvulsants and non-steroidal anti-inflammatory drugs.<sup>3,4</sup>

In present case, there were signs and symptoms of TEN after taking co-trimoxazole and paracetamol. A lady was completely recovered by withdrawal of most suspicious drug co-trimoxazole from treatment. On this basis, diagnosis was made as T/S induced TEN as other causes like HIV or any malignancy were ruled out. Also systemic lupus erythematosus, pemphigus and rheumatological disorders were ruled out. TEN was diagnosed from the history and typical clinical features. According to the Naranjo ADR probability scale (score= 6)<sup>5</sup>, this ADR is categorized as a 'probable' reaction to the drug.

Though there was a common occurrence of drug reaction due to T/S administration, but we reported it to emphasize the fact that caution should be exercised during administration of antimicrobial drugs, especially T/S to prevent this type of reaction.

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