

# Rifaximin-Induced Adverse Drug Reaction of Toxic Epidermal Necrolysis (TEN) in a Patient of Chronic Liver Failure: A Case Report

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## Abstract:-

### ➤ Introduction:

Rifaximin is a semi-synthetic antibiotic used to treat hepatic encephalopathy, traveller's diarrhoea, and irritable bowel syndrome. Common adverse effects of Rifaximin are headache, dizziness, tiredness, GIT manifestations etc. Toxic epidermal necrolysis (TEN), is a very rare adverse effect of rifaximin therapy.

### ➤ Case Description:

A 49 years old alcoholic male with chronic liver disease started on tablet rifaximin 400 mg twice daily in a tertiary health care hospital. After 12 days of taking the medicine, he developed multiple fluid-filled bullous lesions over the lips, chest, abdomen, back, extremities, and genitalia, suggestive of TEN. In routine investigations TLC, Total and direct bilirubin, liver enzymes were high and PT, INR were deranged.

### ➤ Results:

TEN was managed by inj. Dexamethasone and inj. Azithromycin and topical ointment. Tab. Rifaximin was withdrawn. His condition improved on review after a week.

### ➤ Conclusion:

TEN is a rare but serious adverse effect of rifaximin therapy. Our observation adds to the literature of drug-induced TEN and its successful control by drug withdrawal and corticosteroid therapy.

**Keywords:-** Rifaximin, Toxic Epidermal Necrolysis, Chronic Liver Disease, Corticosteroid, Azithromycin.

## I. INTRODUCTION

Toxic epidermal necrolysis (also known as Lyell syndrome), is a rare, life-threatening, cutaneous adverse drug reaction that was first described in 1956.<sup>1</sup> It affects the skin and mucous membranes and is associated with the use of certain medications, such as sulfonamides, allopurinol, pyrazolines antibiotics, and antiepileptics. TEN is characterized by full-thickness necrosis of the epidermis with blister formation without substantial dermal inflammation, with the detachment of >30% of the body surface area and with constitutional symptoms such as fever

and arthralgia. Most cases of TEN are drug-induced, and patients are at the highest risk of developing TEN within the first two months of drug therapy after that, the risk is considerably decreased. Rifaximin is a semi-synthetic antibiotic used to treat hepatic encephalopathy, traveller's diarrhoea, irritable bowel syndrome. Common adverse effects of rifaximin are headache, dizziness, tiredness, GIT manifestations etc. TEN is a very rare adverse effect of rifaximin therapy.

## II. CASE DESCRIPTION

A 49 years old chronic alcoholic male diagnosed case of chronic liver disease developed ascites and was admitted in the medicine ward of a tertiary care hospital and started on tablet rifaximin 550 mg twice daily for 14 days with other medicines. He developed multiple fluid-filled bullous lesions over the lips, chest, abdomen, back, bilateral extremities, and genitalia after 12 days of taking rifaximin suggestive of TEN. His vitals were stable, but he was febrile and drowsy, abdomen was distended. In routine investigations, TLC, Total and direct bilirubin, liver enzymes, creatinine levels were high and PT, INR were deranged.

TEN was managed by injection dexamethasone and injection azithromycin and topical ointment. Tablet rifaximin was withdrawn, rechallenge was not done. His condition improved on review after a week. According to WHO UMC causality assessment regarding the adverse drug reaction caused by rifaximin, indicating that rifaximin was a probable cause of this adverse drug reaction.

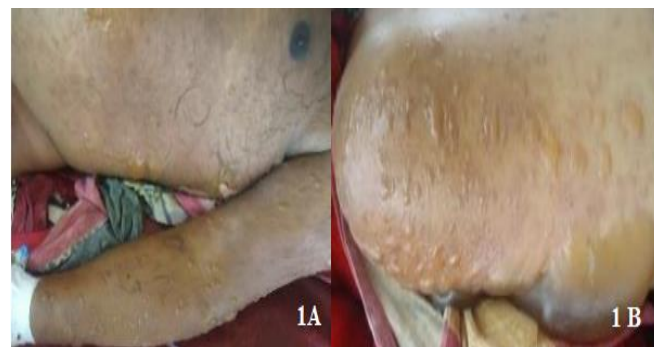


Fig 1A and 1B: Showed Multiple Fluid-Filled Bullous Lesions Over the Chest, Abdomen, and Extremities, Suggestive of TEN.

### III. DISCUSSION

In this case, rifaximin was prescribe to prevent the hepatic encephalopathy secondary to end-stage liver disease and patient took rifaximin for the course of 12 days, then he developed TEN. In this case TEN developed within 12 days of tablet rifaximin which is in coherence with case reports in Philips CA et al.<sup>2</sup> Another two case reports describing severe cutaneous adverse drug reactions associated with rifaximin, were published by Okano et al and Prazuck et al.<sup>3,4</sup> Improvement with steroid and no further symptom manifestation on rifaximin withdrawal is similar to the treatment depicted by Patel AS et al.<sup>5</sup>

### IV. CONCLUSION

TEN is a rare but serious adverse effect of rifaximin therapy. Our observation adds to the literature of drug-induced TEN and its successful control by drug withdrawal and corticosteroid therapy.

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- *Informed Consent*: Taken
- *Confidentiality*: Retained