

## Baclofen-Induced Morbiliform Rashes in Alcohol Dependence: A Case Report

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### Abstract

Baclofen has been commonly used for the treatment of various neurological disorders. Because of its ability to suppress alcohol consumption and craving, it has now been introduced in the treatment of alcohol dependence. Baclofen-induced skin rashes are extremely rare, especially morbiliform rashes. We report a case, who developed morbiliform rashes with a low dose of baclofen.

Received Date: October 14, 2015

Accepted Date: November 13, 2015

Published Date: November 16, 2015

Citation: Singh, H., et al. Baclofen-Induced Morbiliform Rashes in Alcohol Dependence: A Case Report. (2015) J Addict Depend 1(2): 25- 26.

**Keywords:** Baclofen; Morbiliform rashes; Alcohol dependence

### Introduction

Baclofen has a higher affinity towards GABA-B receptors and exerts an inhibitory action on dopaminergic neurons, which originate from the ventral tegmental area and terminate in the nucleus accumbens. Its inhibitory effect on the reward system might be the cause of reduction in the craving for alcohol. Baclofen has been observed to cause suppression of craving among patients with Alcohol Dependence Syndrome (ADS)<sup>[1]</sup>.

The common adverse drug reactions of baclofen in alcohol dependence include headache, drowsiness, nausea, and vertigo. Morbiliform rashes are extremely rare adverse reactions of baclofen. Only a few cases of baclofen-induced morbiliform rashes have been reported in literature. The first case reported of baclofen-induced morbiliform rashes developed asymptomatic skin eruptions predominantly in trunk and upper arms after thirteen days of treatment. As the rashes resolved within one week, baclofen was continued for this patient<sup>[2]</sup>. A case series that included four cases of baclofen-induced morbiliform rashes in ADS has also been reported<sup>[3]</sup>. The skin rashes at different dosages of baclofen ranged from 20 mg to 60 mg/day. In all these cases, the reaction appeared within one week of initiation of baclofen therapy. The rashes were prominent over the chest, axilla, face, and abdomen. In all these cases, the reactions were self-limiting, and the rashes disappeared completely within one week after the drug was tapered. In all the four cases reported, the reactions were considered dose dependant and idiosyncratic.

We report a case of ADS, who developed morbiliform rashes after the first day of baclofen therapy.

### Case report

A 36 year old male city taxi driver, who was diagnosed to have Alcohol Dependence Syndrome (ADS) with simple withdrawal state, was treated in our outpatient clinic. The patient had no past or family history of food or drug sensitivity. He was initially treated for detoxification with 10 mg lorazepam administered orally in divided doses. This was tapered to 2 mg lorazepam at night on the fifth day; and 10 mg baclofen tablet was started for the craving. After the first day of treatment, the patient developed itching and morbiliform skin rashes all over the body, predominantly on both the thighs. On the advice of the dermatologist, baclofen was stopped on the third day of treatment. Besides baclofen, the patient was prescribed a thiamine supplement and lorazepam 2 mg/day. The rashes resolved over the next two days. Figure 1





**Figure 1:** Morbilliform rashes over the thigh region

## Discussion

Although our patient was also on oral lorazepam and oral thiamine supplements during the five days prior to taking the baclofen therapy, in this case the development of body rashes appears to be on account of baclofen. Initially the rashes appeared on the axilla, chest, and abdomen, after which they were more prominent on both the thighs. As reported in the previous cases<sup>[3]</sup>, in our case too, the rashes disappeared within two days of discontinuing the drug. The causality assessments of the adverse drug reactions were performed by using the WHO and Naranjo's causality scales. According to the WHO scale<sup>[4]</sup>, the adverse reaction was found to be 'probable' in its causality. Naranjo's causality scale<sup>[5]</sup> score for this reaction was found to be seven, which implies that the adverse reaction was 'probable' due to the drug. In contrast to the previous reports<sup>[2,3]</sup>, our patient had developed drug rashes with a low dose of baclofen after the first day of treatment. This suggests that baclofen-induced drug rashes are due to idiosyncratic reaction and not because of a dose dependent side effect. This idiosyncratic reaction might be caused by an increased formation of deaminated  $\gamma$ -hydroxy intermediate metabolite of baclofen due to the enzyme inducing effect of ethanol, which may result in an immune mediated reaction with the T lymphocytes giving rise to a dermatological reaction<sup>[3]</sup>. There is therefore, a need for taking up a study to test this hypothesis.

Our patient was diagnosed to have ADS for last five years. However, it is difficult to infer the role of severity of alcohol dependence and development of drug rashes from our case report. Although baclofen-induced skin rashes are an extremely rare adverse effect, it is clinically relevant to educate physicians about baclofen-induced idiosyncratic drug rashes in patients with alcohol dependence.

## Conclusion

Morbiliiform rashes are rare side effects of baclofen and should be carefully monitored and managed.

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