Case Report

Risperidone-induced Erythema Multiforme Minor

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ABSTRACT

Antipsychotic agents are known to cause adverse cutaneous reactions. These are supposedly rare with atypical antipsychotic agents. Adverse dermatologic reactions due to antipsychotic agent risperidone are rarely reported. Here, we present a case of risperidone-induced erythema multiforme minor.

Key words: *Dermatologic reactions, erythema multiforme minor, risperidone*

INTRODUCTION

Antipsychotic agents are known to cause adverse cutaneous reactions in approximately 5% of the individuals for whom they are prescribed.[1] There have been some reports of dermatologic disorders associated with conventional antipsychotics.[2]

Although atypical antipsychotics cause fewer dermatologic symptoms than typical antipsychotics,[2] some recent reports have associated olanzapine[3] and clozapine[4] with skin lesions.

Risperidone, a benzisoxazole derivative, is an atypical antipsychotic. It exhibits high-affinity antagonism at 5 HT2 and D2 receptors. It also binds to alpha-1, alpha-2 adrenergic receptors to a lesser extent. It has no affinity to cholinergic receptors.[2] It is known to cause various adverse effects, out of which cutaneous reactions are very rare. A literature search revealed a few articles of risperidone-induced urticaria, angioneurotic edema, and photosensitivity reactions.

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Here, we present a case in which adverse cutaneous reactions (erythema multiforme minor) developed within 48 h of initiation of risperidone treatment and soon disappeared after discontinuation.

CASE PRESENTATION

A 23-year-old male with premorbid poor academic achievements (failed in the 9th standard), needing assistance in simple verbal calculations, unable to handle money by himself, etc., suggestive of borderline intellectual functioning presented with features of gradual-onset aggressive self-injurious behavior, delusions of persecution, delusions of reference, and third person auditory hallucinations of approximately 3 months duration.

He had no history of mental illness, seizures, head injury, or any recent onset history of psychoactive substance abuse. Detailed history revealed no previous

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drug or food allergies. The patient was not on any medication at this initial presentation.

He was provisionally diagnosed as undifferentiated schizophrenia as per the International Classification of Diseases 10. The patient was admitted to the Government Medical College, Akola, Psychiatry Ward and was started on oral risperidone 4 mg/day in divided dose along with tablet trihexyphenidyl 4 mg/day divided dose and tablet lorazepam 2 mg HS and SOS to control behavioral exacerbations.

Within 2 days of starting treatment, the patient started showing some symptom improvement in the form of decreased intensity of aggression and hallucinations. However, he developed gradually progressive nonitching rash all over the body.

Dermatologist opinion was sought for this, and as per their opinion, the rashes were multiple raised symmetric mildly edematous papules with predominantly truncal and facial involvement. There was no pulmonary or mucous membrane involvement. A provisional diagnosis of drug (risperidone) induced erythema multiforme minor versus drug (risperidone) induced skin rash was kept by a dermatologist [Figures 1-3].

Tablet risperidone was stopped as per the dermatologist opinion. The patient was prescribed injection dexamethasone 4 mg IM stat. A complete blood count and X-ray of the chest posteroanterior view were advised and both were normal.

Dermatologic manifestations cleared out within a day of injection dexamethasone administration. Considering ethical issues with deliberate re-challenge of offending agent (risperidone), treating team refrained from the same.

The patient was then started on a combination of trifluoperazine (5 mg/day) + trihexyphenidyl (2 mg/day) (THP + TFP combination) in twice a day dosing after a gap of 3 days of stopping risperidone.

With this, the patient continued to have similar clinical symptom improvement, and no fresh skin lesions appeared with the introduction of THP + TFP combination.

On evaluation with the Naranjo adverse drug reaction causality assessment scale,[5] we obtained a score of 6, which indicates a probable association between drug and adverse event.

On the WHO-UMC causality categories,[6] the aforementioned adverse drug reaction comes under probable/likely category implying, "the event or laboratory test abnormality, with reasonable time relationship to drug intake, unlikely to be attributed to disease or other drugs, response to withdrawal clinically reasonable."

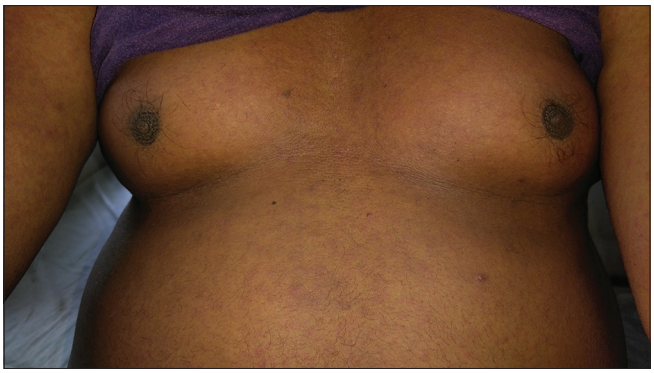

Figure 1: Mildly edematous cutaneous rash over chest & abdomen

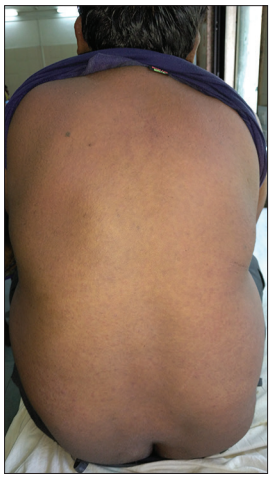

Figure 2: Mildly edematous papular rash extending to back without any evident excoriation

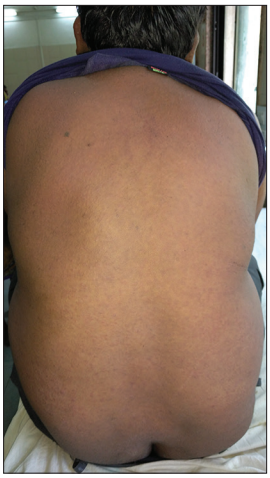

Figure 3: Papular rash extending to back without any excoriation

CONCLUSION

The adverse reaction, in this case, can be attributed to the immunological cause. The metabolite of the drug

may behave as a hapten and induce a hypersensitivity reaction.[7]

A broad literature search on PubMed revealed three similar case reports of risperidone-induced dermatologic manifestations.[8-11]

While in first two case reports, risperidone was concomitantly administered with lithium and oxcarbazepine.[8,9]

Both of these agents themselves are known causes of adverse dermatologic effects. While in the third case report,[10] the patient was not admitted to the ward for observation and was under outpatient department follow-up making other causes such as probable environmental exposure, also a plausible cause of the appearance of skin rash.

Hence, we believe that we reported a rare manifestation of risperidone therapy.

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Conflicts of interest
There are no conflicts of interest.

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