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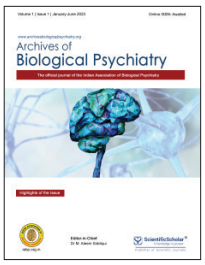

*Case Report* *Psychiatry*

# Rash decisions: A case report of Risperidone and exanthematous eruptions

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## ABSTRACT

Here, we describe a clinical case involving a 19-year-old male diagnosed with schizophrenia and initiated on risperidone 2 mg/day. The dose was gradually built up to 6 mg/day. Within a week, the patient manifested an extensive exanthematous eruption characterized by collarette-shaped desquamation and intense pruritus. The medication was promptly discontinued, and aripiprazole was introduced, resulting in the complete resolution of the cutaneous manifestations within the subsequent week.

**Keywords:** Antipsychotics, Risperidone, Exanthematous eruptions, Schizophrenia, Adverse drug reaction

## INTRODUCTION

Antipsychotic agents commonly trigger cutaneous reactions in approximately 5% of users, often presenting as exanthematous eruptions, skin pigmentation alterations, photosensitivity, urticaria, and pruritus.[1] Risperidone is an atypical antipsychotic primarily targeting 5-HT2 and D2 receptors, and risperidone-associated cutaneous reactions are infrequent, but isolated instances of cutaneous adverse reactions have been documented.[2]

## CASE REPORT

A 19-year-old male, presented to the outpatient department with persecutory delusion against his neighbors and second-person commenting-type auditory hallucination for 8 months, along with impaired biological and socio-occupational functioning for a similar duration. A diagnosis of schizophrenia was assigned, and he was started on risperidone 2 mg/day and was hiked up to 4 mg/day with a plan of up-titration to 6 mg/day if needed on subsequent visits. The patient came back after 7 days with extensive exanthematous lesions all over the body, including arms [Figure 1a], abdominal region [Figure 1b], and back [Figure 1c], which started after 2 days of starting risperidone. The eruptions started as an acute rash with pinhead-sized pustules with an erythematous base. The rash started in the elbow region and extended to the trunk and the whole upper limb within a span of 48 hours. The rash was associated with severe itching and a burning sensation. Mucosal involvement was not present. On examination, collarette-shaped desquamation was observed. A dermatological opinion was taken that concurred with the advice from our side and did not add any medication. Risperidone was stopped, and the patient was

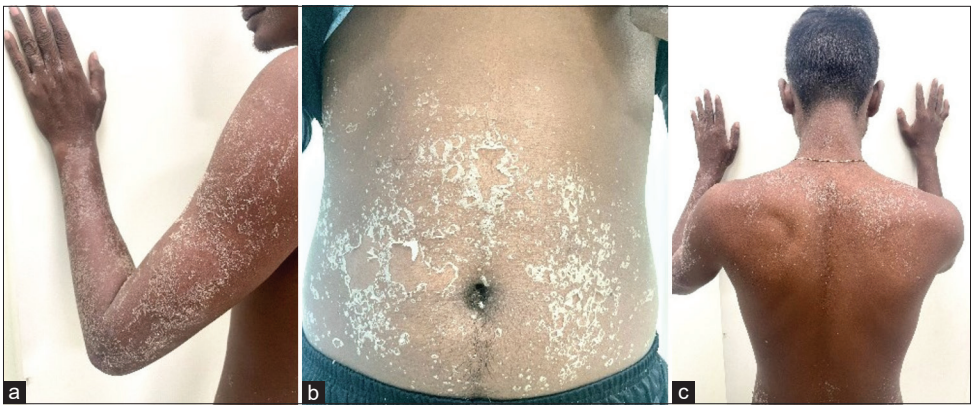


**Figure 1:** Exanthematous eruptions over different areas of the body, (a): Lesions over the arms, (b): Lesions over the abdominal region, (c): Lesions over back.

started on aripiprazole 10 mg/day and was advised for a follow-up after 7 days. On the next visit, there were no lesions found in the patient.

A score of 6 on the Naranjo causality assessment scale was found after evaluation, which indicates that the drug is the possible agent for the skin eruption [Figure 1].

## DISCUSSION

A recent literature search highlighted a singular case from Korea where a 4 mg/day oral risperidone solution led to a facial-specific acute cutaneous syndrome.[3] An Indian case involving urticaria on the face and neck, characterized by erythematous patches with raised ridges with risperidone 3 mg/day, was reported earlier.[4] Another case reported incidents of rashes when risperidone was started at a dosage of 6 mg/day. The rashes did not resolve with a lower dosage, and ultimately, the lesions resolved after the medicine was stopped.[5]

The most prevalent form of drug eruptions is characterized as maculopapular rash, exhibiting erythematous macules that evolve into papules ranging from 1 to 5 mm in diameter, potentially merging into plaques.[6] Notably, the timing of lesion occurrence is distinct, with the initial appearance following a sensitization phase, usually 5–14 days after treatment initiation and occasionally after drug cessation.[7] Maculopapular rash typically affects the face, neck, or upper trunk, spreading symmetrically toward the limbs. In general, it is self-limiting and subsides within 7–14 days upon discontinuing the causal medication.[6]

Several theories might explain our case of delayed hypersensitivity reaction. The hapten hypothesis postulates haptens forming hapten-protein complexes and inducing immunoglobulin (Ig) E or IgG-mediated responses. The pharmacological hypothesis mentions that interaction occurs through reversible drug binding to human leukocyte antigens or T-cell receptors, bypassing antigen-processing pathways. The pseudo-allergic hypothesis mentions that responses are not immune-mediated but linked to a drug's pharmacological or toxicological properties and genetic predisposition. Although there are several theories, there is an absence of a strong evidence base to postulate the exact mechanism behind adverse reactions in our patients.[8,9]

## CONCLUSION

Clinicians should remain vigilant about the rare complication of skin eruptions with risperidone at a relatively higher dose, especially during the first few weeks. Although no serious complications such as toxic epidermal necrolysis or Stevens-Johnson syndrome have been reported with risperidone to date, eruptions can be a reason for non-adherence to the treatment.

### Ethical approval

Institutional Review Board approval is not required.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

### Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that they have used artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript or image creations.

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