Risperidone-induced skin rash

Sir,

Antipsychotic agents are known to cause adverse cutaneous reactions in approximately 5% of the individuals of which exanthematous eruptions, skin pigmentation changes, photosensitivity, urticarial, and pruritus are common.\(^1\) Risperidone, a benzisoxazole derivative is an atypical antipsychotic. It exhibits high-affinity antagonism at 5 HT\(_2\)\(^a\) and D\(_2\) receptors. It 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 reaction is very rare. A thorough literature search revealed a few articles of risperidone-induced urticaria, angioneurotic edema, and photosensitivity reactions. We herein present a case of rare adverse effect, risperidone-induced eczematous skin rash.

Mr. R, a 20-year-old male presented with complaints of aggressive behavior, self-injurious behavior, delusions of persecution, and third person auditory hallucinations of 2 weeks duration. He had a 3 years history of paranoid schizophrenia, diagnosed as per International Classification of Diseases 10, and was on irregular treatment. The current exacerbation happened after about 6 months of partial remission. Detailed history revealed no previous drug or food allergies. The patient was not on any concomitant drug therapy when he reported though he had taken olanzapine intermittently in the past. The patient was started on oral risperidone 6 mg/day in divided doses and was instructed follow-up after 1 week, as the caretakers were not ready to admit him. When he reported back, he showed clinical improvement but complained of generalized pruritus. Examination revealed excoriation of skin. Dermatologist opinion was taken, and he was treated with terbinafine and chlorpheniramine after total and differential white blood cell count and absolute eosinophil count, which were within normal limits. Simultaneously, the dose of oral risperidone was reduced to 4 mg/day suspecting a drug-induced rash. The patient came back in a week with no improvement in the dermatological complaints but significant reduction in psychotic symptoms. Examination revealed scaling and excoriation of skin. The patient continued to use terbinafine, and the dose of risperidone was reduced to 2 mg/day. In a span of 1 week, the patient reported again with exacerbation of the dermatological symptoms and now showed generalized scaling of the skin, papules, and ulcers with serous discharge over the dorsum of the hand. Risperidone was stopped completely and the dermatologist prescribed hydrocortisone acetate ointment. Follow-up after 1 week, showed considerable recovery of the scaly lesions and it completely disappeared after 2 weeks of discontinuation of risperidone. Even hydrocortisone was stopped after 2 weeks, and there were no fresh skin lesions during subsequent follow-up. Considering the ethical issues involved, re-challenge was not done and an alternative drug olanzapine 10 mg/day was prescribed, to which the patient is compliant and symptomatically better. Figure 1 shows the excoration while on risperidone and Figure 2 shows the completely healed rash after stopping it.

On evaluation with the Naranjo causality assessment scale, we obtained a score of 6, which is probable that the adverse reaction was caused by the drug. The adverse reaction, in this case, can be attributed to the immunological or nonimmunological cause. The metabolite of the drug or the excipients used may behave as a hapten and induce a hypersensitivity reaction in immunological etiology whereas the nonimmunological causes can be attributed to drug interactions and metabolic alterations.\(^3\)

A broad literature search on PubMed throws light on one article of low dose oral risperidone solution induced

Figure 1: Skin excoriation while on risperidone

Figure 2: Completely healed rash after stopping risperidone
cutaneous syndrome reported from Korea in which only the face was involved, and the reaction was acute.\textsuperscript{[4]} In another meta-analysis, risperidone-induced adverse effects was reported in 13,710 subjects, of which only 19 had eczema. Thus, the incidence of cutaneous reactions is <0.1%\textsuperscript{[5]} The other Indian report is of a case of “giant urticaria” over face and neck with risperidone. Urticaria is an erythematous patch over the skin with elevated ridges (hives).\textsuperscript{[6]} The eczematous rash we are reporting started as pruritus, progressing to desquamation of skin followed by ooze and healing; that had spared head and neck, but involved all other areas. Hence, we are reporting a rare case of risperidone-induced skin rash, the first of its kind being reported in India.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

Priya Janardhana, Anil Kumar Mysore Nagaraj\textsuperscript{1},
P. L. Basavanna
Department of Pharmacology, Mysore Medical College and Research Institute, \textsuperscript{1}Department of Psychiatry, Mysore Medical College and Research Institute, K. R. Hospital, Mysore, Karnataka, India.
E-mail: nagarajakm24@gmail.com

REFERENCES
1. Warnock JK, Morris DW. Adverse cutaneous reactions to antipsychotics. Am J Clin Dermatol 2002;3:629-36.
2. Singh D, O’Connor DW. Efficacy and safety of risperidone long-acting injection in elderly people with schizophrenia. Clin Interv Aging 2009;4:351-5.
3. Lee A, Thomson J. Drug-induced skin reactions. In: Adverse Drug Reaction. 2nd ed. London: Pharmaceutical Press; 2006. p. 125-56.
4. Chae BJ, Kang BJ. Rash and desquamation associated with risperidone oral solution. Prim Care Companion J Clin Psychiatry 2008;10:414-5.
5. eHealthMe. Could Risperidone Cause Eczema. Available from: http://www.factmed.com/study-RISPERIDONE-causing-ECZEMA.php. [Last accessed on 2015 Jun 16].
6. Mishra B, Saddichha S, Kumar R, Akhtar S. Risperidone-induced recurrent giant urticaria. Br J Clin Pharmacol 2007;64:558-9.