Academic Sciences Asian Journal of Pharmaceutical and Clinical Research
Vol 6, Issue 1, 2013 ISSN - 0974-2441

Case Report

A CASE REPORT OF AMISULPRIDE INDUCED FLAGELLATE ERYTHEMA FOLLOWED BY PIGMENTATION AND PHOTOSENSITIVITY IN A SCHIZOPHRENIC PATIENT

ARUP KUMAR MISRA, SHAILESH NAGPURE, SUSHIL KUMAR VERMA

Department of Pharmacology, Mahatma Gandhi Institute of Medical Sciences, Sevagram, Maharashtra, India ,Email: arup2003m@gmail.com

Received:19 August 2012, Revised and Accepted:16 October 2012

ABSTRACT

Antipsychotic agents are the most prescribed drug for schizophrenia and accounts to cause adverse cutaneous reactions in approximately 5% of the individuals for whom they are prescribed. Flagellate hyperpigmentation with photosensitivity may be unusually caused by amisulpride therapy in schizophrenic patient. The most important step in minimizing the adverse reactions is prompt withdrawal of amisulpride and gives symptomatic treatment for soothing effects.

Keywords: Antipsychotics agents; Schizophrenia; Erythema; Flagellate pigmentation; Photosensitivity

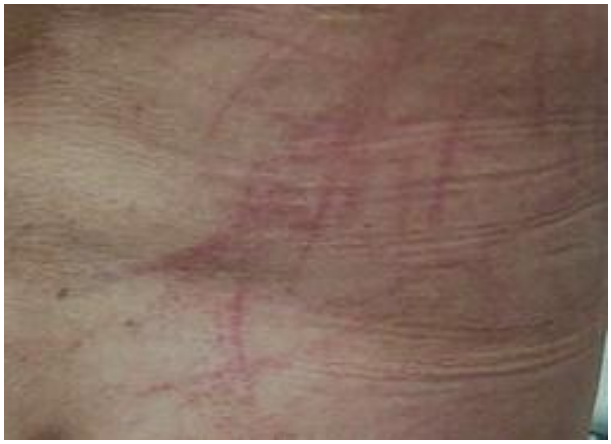
INTRODUCTION

Atypical antipsychotics are the newer drugs with specific characteristics, such as minimal risk of acute and chronic movement disorders and less sedation. The atypical antipsychotic drugs are also thought to be more effective than conventional drugs in the treatment of negative symptoms in schizophrenia. Amisulpride is a second-generation antipsychotic approved as monotherapy for treatment of refractory schizophrenia.[1] There are few side effects of amisulpride therapy which are reported. So, we hereby report the following case of flagellate erythema followed by pigmentation with photosensitivity to amisulpride in a patient with hebephrenic schizophrenia.

CASE REPORT

A 30 year old male patient, a known case of hebephrenic schizophrenia with seizure disorders on Tablet Amisulpride 100 mg once a day before sleep , Tablet Haloperidol 5 mg once a day before sleep and Tablet Trihexyphenidyl Hydrochloride 2 mg once a day for duration of 2 months. After 2 months of initiation of therapy, he came to outpatient department with complains of erythema with itching on back for 15 days which aggravates more on exposure to sun. He denied the recent use of new soaps, new creams, or different foods. He had no history of skin lesions prior to onset of skin lesion and did not report scratching in the region. Our patient, however, did not have systemic illness prior to the onset of skin lesions.

On examination, the patient was alert, his pulse and blood pressure were normal; he had no pallor, no icterus, no lymphadenopathy; no clubbing and no pedal edema. On systemic examination his respiratory, central nervous and cardiovascular systems were within normal limits. On examination of skin, he has linear and streaks erythema on his back and some of which contained punctuate haemorrhages and pustules. (Fig.1)



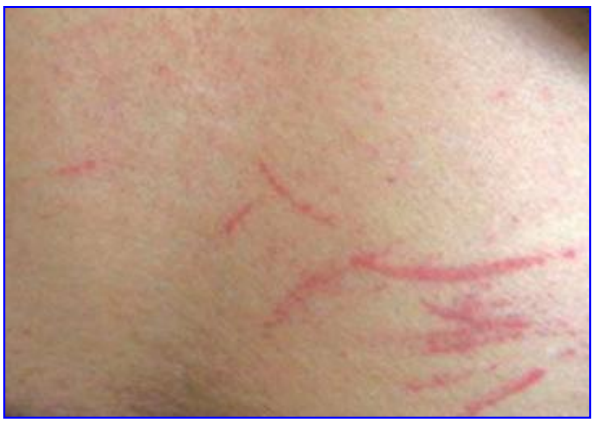


Fig 1:Flagellate Erythema due to Amisulpride.

On Investigating, his plasma ESR was found to be 05 mm/ hour fall (normal 0-15 mm/hour fall, Westergren's Method). A complete blood counts reveals raised whole blood cells count of 12.4 *10^ 9/L (normal 4.5 to 10.5) and platelets was 309 *10^9/L (normal 150 to 450) . Others parameters were within normal range. Peripheral smear showed normocytic normochromic RBCs, neutrophil leucocytosis and platelets were adequate. Skin biopsy showed dermal oedema, necrotic keratinocytes, perivascular lymphocytes and a band of basal epidermal melanin pigment. Following the deranged report and clinical suspicions, Tablet Amisulpride was stopped but was instructed to continue the other two drugs and was also given sunscreen and moisturizer cream to apply to the affected areas lesion twice daily. He was advised to review in outpatient department after one month. On following visits, his erythema subsided but it turned into pigmentation on back and his blood reports were also repeated and found to be within normal range. He was advised to continue with Tablet Haloperidol 5 mg once a day before sleep and Tablet Trihexyphenidyl Hydrochloride 2 mg once a day and to continue with sunscreen and moisturizer on affected areas twice daily.

DISCUSSION

Amisulpride is a substituted benzamide derivative and a highly selective presynaptic dopamine D2/D3 receptor blocker at low dose (50-100 mg/day), thereby enhancing dopamine transmission and possibly improving negative symptomatology; whereas higher doses (630-910 mg/day) antagonize postsynaptic D2/D3 receptors, thereby inhibiting dopamine transmission and possibly improving positive symptomatology. [2] In our case, the patient is diagnosed with hebephrenic schizophrenia so the chances to develop negative symptoms and decline in social functioning increases. So, he was

prescribed with low dosages of amisulpride (100 mg/day) which significantly reduced negative symptoms. [3,4] In our report, the patient developed flagellate erythema followed by pigmentation with photosensitivity. With the exception of this skin pigmentation, the patient tolerated amisulpride well and had a good clinical response. Antipsychotic agents are known to cause adverse cutaneous reactions and mostly include skin pigmentation, photosensitivity, urticaria and puritus. [5]

Tablet Amisulpride given for long duration has been postulated for the pathogenesis of photosensitivity. [6] Pigmentation cause by antipsychotics is cumulative effects and caused by the post-inflammatory effects of amisulpride to the cutaneous vessels. It results from the overproduction of melanin or an irregular dispersion of pigment after cutaneous inflammation. There are other probable mechanisms to produce this adverse drug reaction, it may be that the drug reacts with melanin to form a drug-pigment complex which is often stimulated by exposure to sunlight and this may cause sun-induced melanin synthesis with formation of these complexes or it may also induce pigmentation directly by accumulating and/or reacting with other substances in the skin. [7,8] Post-inflammatory hyperpigmentation can worsen with exposure to sun or with persistent or recurrent inflammation. [9] Sunlight / Ultraviolent rays are the most powerful and well-known extrinsic factor that enhances skin pigmentation and also up-regulate melanogenesis. [10]

There is no specific treatment for flagellate erythema and the treatment consists of exclusion of Tablet Amisulpride as well as symptomatic treatment. Systemic steroids such as prednisone or dexamethasone appear to aid in speeding its resolution. Some patients may experience the so-called heat induced recall phenomenon, which means the recurrence of flagellate erythema on exposure to sun. [11] Those individuals who are known to be photosensitive and started on a regimen of amisulpride should be monitored carefully to minimize their unprotected exposure to the sun.

Patient should be educated on the use of daily broad-spectrum sunscreen with a sun protection factor (SPF) and sun-protective measures, such as sun protective clothing and also use moisturizers which give soothing effects to skin. Topical depigmenting agents such as hydroquinone, azelaic acid and retinoids can be effective alone or in combination. [12] Chemexfoliation and laser therapy can also be incorporated into the management strategy if needed. [13,14]

In our case, the flagellate pattern of erythema followed by pigmentation and photosensitivity has been probably associated with atypical antipsychotics, amisulpride which was used for hebephrenic schizophrenia with seizures. According to the Naranjo probability scale, a causality assessment of this ADR due to amisulpride was probable (overall score-6). [15] In this case rechallange is not feasible as above mentioned adverse drug reaction will further detoriate the condition.

CONCLUSION

Amisulpride is an atypical antipsychotic drug given usually for negative symptoms of schizophrenia. Pigmentation with photosensitivity is common adverse drug reaction seen with many anti-psychotic drugs. This type of reaction is normally caused due to cumulative action of the drug due to long duration of therapy that is required in the treatment of schizophrenia. Patient having this type of reaction should discontinue the drug and consult the concerned psychiatrist for alternative drug and protect from sunlight by applying sun-screen and moisturizers. Even the plasma level of anti-psychotic should be monitored regularly to avoid side effects and optimize the dosage according to the therapeutic level of the drug in plasma.

REFERENCES

1. Kerwin RW. The new atypical antipsychotics. A lack of extra pyramidal side-effects and new routes in schizophrenia research. Br J Psychiatry. 1994;164:141–148.
2. Kerwin R. From pharmacological profiles to clinical outcomes. Int Clin Psychopharmcol. 2000;15:S1–4.
3. Kontaxakis VP, Havaki-Kontaxaki BJ, Ferentinos PP, Paplos KG, Soldatos CR. Switching to amisulpride monotherapy for treatment-resistant schizophrenia. Eur Psychiatry. 2006 Apr;21(3):214-7.
4. Danion J, Rein W, Fleurot O. Improvement of schizophrenic patients with primary negative symptoms treated with amisulpride. Am J Psychiatry. 1999;156:610–616.
5. Warnock JK, Morris DW. Adverse cutaneous reactions to antipsychotics. Am J Clin Dermatol. 2002;3:629–636.
6. Laurence Borras, Philippe Huguelet. A Case Report of Photosensitivity to Amisulpride. Prim Care Companion J Clin Psychiatry. 2007;9(2):153.
7. Drug-induced skin pigmentation [Internet]. 2004 [Updated 2011 Feb 14; cited 2011 May 10]. Available from: http://dermnetnz.org/reactions/drug-pigmentation.html
8. Costin GE, Hearing VJ. Human skin pigmentation: melanocytes modulate skin color in response to stress. Faseb J. 2007;21:976–94.
9. Ruiz-Maldonado R, Orozco-Covarrubias ML. Post-inflammatory hypopigmentation and hyperpigmentation. Semin Cutan Med Surg. 1997;16:36–43.
10. Yamaguchi Y, Hearing VJ. Chapter 6: Melanocyte distribution and function in human skin: effects of UV radiation. In: Hearing VJ, Leong SPL, editors. From melanocytes to malignant melanoma: the progression to malignancy. Humana Press; Totowa: 2006. pp. 101–115.
11. Flagellate erythema [Internet]. 2007 [Updated 2010 Mar 05; cited 2011 May 10]. Available from: http://dermnetnz.org/reactions/flagellate.html
12. Grimes PE. Managment of hyperpigmentation in darker racial ethnic groups. Semin Cutan Med Surg. 2009;28:77–85.
13. Nanda S, Grover C, Reddy BS. Efficacy of hydroquinone (2%) versus tretinoin (0.025%) as adjunct topical agents for chemical peeling in patients of melasma. Dermatol Surg. 2004;30:385–388.
14. Battle EF, Hobbs LM. Laser therapy on darker ethnic skin. Dermatol Clin. 2003;21:713–723.
15. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, et al. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther. 1981;30:239-45.