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CASE REPORT

Quetiapine Induced DRESS Syndrome

Vishal R. Tandon, Roshi, Poonam Sharma, Annil Mahajan[1]

Abstract

Quetiapine is second-generation antipsychotic drug used in conditions like affective disorders, anxiety disorders, autism, spectrum disorders, dementia and delirium. Anticonvulsants like phenytoin, phenobarbitone, carbamazepine, sulphonamides and allopurinol are the most common drugs responsible for developing DRESS syndrome. We failed to cite any case of DRESS syndrome caused by quetiapine while reviewing the literature. Hence we, report possibly a first case of DRESS syndrome caused by quetiapine.

Key Words

Quetiapine, DRESS Syndrome, Adverse Drug Reaction, cutaneous disorders

Introduction

Quetiapine is an FDA approved second-generation antipsychotic drugs used in conditions like affective disorders, anxiety disorders, autism, spectrum disorders, dementia and delirium. It acts by blockade of D2 receptor in the mesolimbic pathway & also facilitates serotonergic transmission by acting as partial agonists at 5HT1A receptors. [1]

Drug rash with eosinophilia and systemic symptoms (DRESS) syndrome is a severe, idiosyncratic cutaneous reaction to drugs with visceral involvement with estimated incidence of 1 in 1000 to 1 in 10,000 exposures to high-risk drugs. [2] It is one of the potentially life-threatening condition having mortality rate of 10%. [3]

Anticonvulsants like Phenytoin, phenobarbitone, carbamazepine, sulphonamides and allopurinol are the most common drugs responsible for developing this syndrome but now other drugs like minocycline, terabinafine, azathioprine, allopurinol, lamotrigine, dapsone, cyclosporine, captopril, metronidazole, ibuprofen, nevirapine, abacavir, etc have also been implicated for such reactions. [4, 5, 6]

We failed to cite any such case of DRESS syndrome caused by quetiapine while reviewing the literature; hence the case is worth reporting.

Case Report

A 44 year old female, with history of ischemic stroke two months back and was on treatment for fresh onset seizures and irrelevant talking. She was on Tab. Aspirin plus atorvastatin (150/20) OD, Tab. Phenytoin Sodium 300 mg OD since last 2 months but on starting Tab. Quetiapine 25mg BT on 21-02-2018, presented with generalized swelling, itching and rash all over the body on 6 March, 2018. The patient had no history of smoking, alcohol or drug abuse. There was no other associated pathology and there was also no similar past history of drug allergy.

Departments of Pharmacology & Therapeutics and [1]Internal Medicine, Govt. Medical College Jammu, J&K- India

Correspondence to: Dr. Vishal R Tandon, Professor & Incharge ADRM Centre-Deptt. of Pharmacology & Therapeutics GMC Jammu- J&K India

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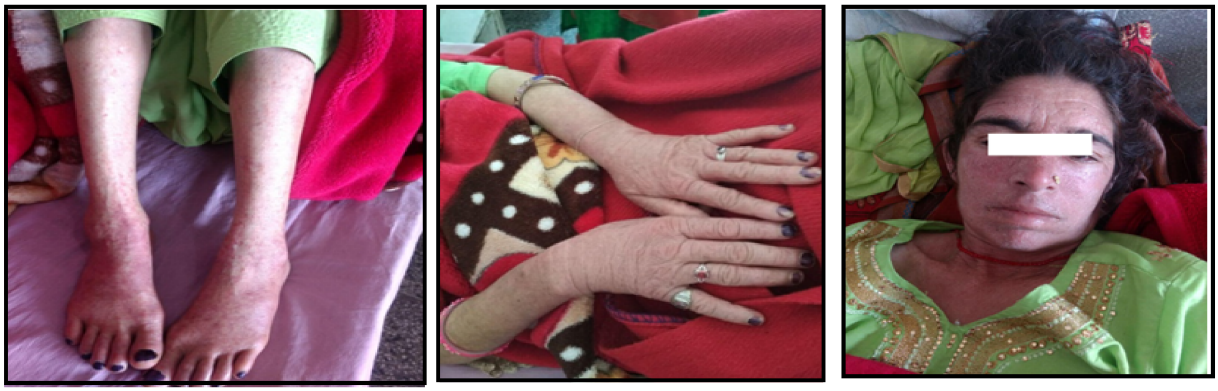

Figure 1-3. Erythema and rash with dusky hue and Edema on the legs and Hands as well as Erythema and macula-papular rash and Edema on the Face

Patient presented with high grade fever and skin lesions which were multiple, bilaterally symmetrical, erythematous papules on dorsum of hands, forearms, arms, neck, trunk, lower limbs and feet. Some of papules had dusky hue at centre. Facial puffiness with erythema was present over the cheeks. Purpuric spots were present over buccal mucosa. Generalised lymphadenopathy (right cervical, bilateral axillary and inguinal) was present. Lymph nodes were discrete but tender & firm in consistency. Patient was managed & treated.

On examination, pulse rate was 88beats/ minute, blood pressure 110/70 mmHg, chest and CVS was normal. Abdomen was soft and non tender. On investigation Hemoglobin was 10.8 mg/dl, Total Leucocyte Count was 9000 per cumm, platelets 1.6 lakh, Differential Leucocyte count was neutrophils 60%, lymphocytes 29%, monocytes 2% and eosinophils 9%. Peripheral blood film showed predominantly normocytic blood picture with mild to moderate hypochromia and few microcytes were seen. Serum urea was 17mg%, serum creatinine 0.5mg%, serum uric acid 7.1mg%, serum sodium 145m Eq/L, serum potassium 4.2mEq/L, serum bilirubin 0.6mg%, total proteins 7.9mg%, serum albumin 4.2mg%, serum Alkaline phosphatase 264mg%, SGOT 83mg%, SGPT 95mg%, serum Cholestrol 100mg%, serum amylase 56IU/L and random blood sugar was 105mg%. Urine examination was normal.

She was managed by giving inhaled oxygen, i.v fluids, Inj. Dexamethasone 2cc i.v 8hrly, Inj. chlorphenaramine 1 amp i.m tid, Inj. ranitidine 1amp i.v tid. Both Tab phenytoin sodium and quetiapine were stopped. Dermatological consultation was taken and she was labelled as a case of DRESS after Absolute Eosinophil Count came out to be 810 cells. Then she was given tab Teczine 5mg and moisturizing lotion. The patient showed improvement and is on regular follow up.

Since the patient was already taking the tab phenytoin and the current Adverse event developed only after quetiapine points towards the possibility of quetiapine to be responsible for it. Further brief de-challenge of quetiapine ameliorated the symptoms. The possibility of on-going phenytoin to be responsible for said ADR is almost negligible as the drug was being allowed to be continued and did not aggravated the ADR. No re-challenge was done due to ethical reasons and no attempt was made to study the dose response relationship hence the mechanism and type of ADR cannot be commented upon. Furthermore, the appearance of ADR could not be explained by any concurrent disease, drug or chemical.

Adverse drug reaction (ADR) was probable as assessed by WHO uppasla monitoring the center causality scale and Naranjo's score. [7,8]

Severity of the reaction as assessed using Hartwig ADR severity assessment scale classified the said ADR as potentially serious. [9] Preventability assessment was done by using Schumock and Thornton scale which classified the ADRs as preventable. [10]

Authors admit one limitation of the said case report that drug level were not done in the said case to confirm the causality assessment.

Discussion

DRESS syndrome has a latent period of 2-6 weeks. For phenytoin, the mean interval to onset is 17-21 days but the patient was taking phenytoin since two months. [3] So there is more likelihood of quetiapne being the culprit drug as the patient developed the reaction after two weeks

of starting the drug.

The reaction usually present with high grade fever that lasts for weeks accompanying cutaneous eruptions. Skin lesions starts as macular erythema that later evolves to red, symmetrical, pruritic confluent papular rash involving trunk, face and limbs. The current case also presented in the similar way.

Angioedema with persistent facial involvement is characteristic and indicates severe reaction. However, in the current ADR was managed well before the development of angioedema. Lymphadenopathy is common feature seen in 75% of the patients. Involvement of internal organs is seen at presentation with liver being the commonest. Liver involvement can vary from deranged LFTs to fulminant hepatic necrosis. Blood abnormalities are seen in 50% of patients of which eosinophilia more than 1500/cc is characteristic seen in 80% of cases, other being neutrophilia or presence of atypical lymphocytosis, blood dyscariasis or even haemolytic anaemia and changes in the immunoglobulin levels. [3,6] The dramatic presentations of DRESS syndrome warrant physician to have high suspicion particularly when there are no specific treatment guidelines available thus early diagnosis with cessation of inflicting drug, supportive measures and monitoring can be lifesaving.Quetiapine being relatively a new drug introduced in neurological practice and is expected to be used more frequently. Thus, every prescriber should be aware of the rare possibility of it to cause DRESS syndromereleased, heart filled, aortic venting done, aortic cross clamps released. Repeat TEE done, shows no collection in aneurismal sac. Patient's hemodynamics remained stable; closure of chest done after successful weaning from bypass. Patient had an uneventful post op. period. She was symptomatically better, is now being followed up on OPD basis.

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Conflicts of Interest

There are no conflicts of interest.

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