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CASE REPORT

Allopurinol Causing Dress syndrome: An Interesting Case Report

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***ABSTRACT*:**
Drug rash with eosinophilia and systemic symptoms (DRESS) syndrome is a distinct, severe, idiosyncratic reaction to a drug characterized by a prolonged latency period. It is followed by a variety of clinical manifestations, usually fever, rash, lymphadenopathy, eosinophilia, and a wide range of mild-to-severe systemic presentations.We report an interesting case of allopurinol causing DRESS Syndrome.
Key words: Allopurinol, Dress syndrome, Rashes.

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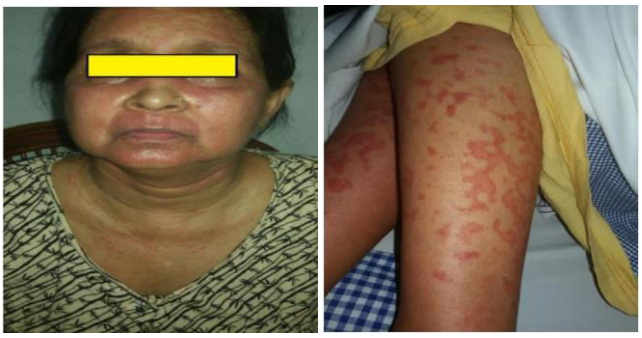
INTRODUCTION:
The onset of symptoms is often delayed, occurring 2-6 weeks after drug initiation. The incidence of DRESS has been estimated to be between 1 in 1,000 and 1 in 10,000 drug exposures.[1] It carries a mortality rate of 10–20%, with most fatalities the result of liver failure. Treatment consists of supportive therapy, corticosteroids, and antihistamines.[2] More than 50 drugs have been linked to DRESS syndrome. The drugs most often reported with DRESS include anticonvulsants (particularly those with aromatic structures), sulfa derivatives, antidepressants, non-steroidal anti-inflammatory drugs, and antimicrobials.[3,4]

CASE-REPORT:
A 52 year previously healthy female visited in a hospital with complaints of pain and swelling in left ankle joint where she was investigated and diagnosis of gout was made and started on the tablet allopurinol 100 mg thrice a day. Following two weeks after the medication she complains of a red color spot in her chest, small in size, multiple, raised and palpable with itching. The rashes remain constant for next week after that became associated with fever and started progressing to other parts of the body. Fever and rash were not associated with bleeding from any sites, hematuria, malena, hematemesis, gum, sub-conjuctival and nasal bleeding. There was no history of intake of non-steroidal anti-inflammatory drugs, anti-seizure drugs. On examination, the patient was conscious and well oriented to time, place and person. Her vitals were stable. There was no pallor, icterus, lymphadenopathy, cyanosis, clubbing on general examination. There was maculopapular rash all over the body, non-blanching in character, palpable with raised margin (Photograph-1).



Photograph 1: Genealised maculopapular rash with palpable, raised margins.

Table-1: Changes in Blood Counts

Date	04/07/15	07/07/15	10/07/15	11/07/15	14/07/15
Haemoglobin (g/dl)	12.2	12.2	11	11.3	11.5
Total leucocyte count (per mm^3)	18500	33800	31700	18000	15230
Differential leucocyte count	$N_{71}L_{16}E_{08}$	$N_{75}L_{5}E_{18}$	$N_{70}L_{11}E_{15}$	$N_{53}L_{17}E_{30}$	$N_{76}L_{18}E_{6}$
Platelets (in lakhs)	2.1	0.9	0.55	4.39	3.62
MCV (fl)	82	81	81	81	86

All other systemic examination was within normal limits. A provisional diagnosis of DRESS syndrome was kept and allopurinol was founded as the culprit. It was continued and corticosteroids were added during treatment and patient responded well to treatment. Blood count reveals normal hemoglobin levels, varying platelet count and Leucocytosis with increased eosinophilia as shown in Table-1. Her renal profile was within normal limits, i.e. (Creatinine/urea=0. 7/37 mg/dl). Amongst liver function her ALT and AST were increased upto a value of 71 and 263 IU respectively. There was no hyperbilrubinemia and A:G reversal. Screening tests for malaria, dengue, and blood and urine culture were negative for infections. As a disease of exclusion and DRESS was kept as provisional diagnosis and allopurinol was discontinued.Sequential monitoring and treatment with steroids shows improvement in eosinophilia, which came back to normal in the few days. The patient improves on with drawl of allopurinol and low dose steroids and discharged.

DISCUSSION:

DRESS syndrome is a complex syndrome with a broad spectrum of clinical features. The clinical manifestations are not immediate and usually appear 2 to 8 weeks after introduction of the triggering drug.Common features consist of fever, rash, LAP, hematological findings (eosinophilia, leukocytosis, etc.), and abnormal liver function tests, which can mimic viral hepatitis.[5]Antiepileptic medications, such as phenytoin and phenobarbital, are thought to be the predominant cause of DRESS syndrome with an incidence of 1 per 5,000 to 10,000 exposures.[1] The diagnosis of DRESS syndrome is mainly clinical and one must consider the latency period, diversity of symptoms, and exclusion of similar non-drug-induced conditions. Multiple diagnostic criteria have been developed and used in order to standardize the diagnosis and management of DRESS, albeit with limited success. The RegiSCAR group suggested criteria for hospitalized patients with a drug rash to diagnose DRESS syndrome. DRESS syndrome must be recognized promptly and the causative drug withdrawn. Indeed, it has been reported that the earlier the drug withdrawal, the better the prognosis.[7] Treatment is largely supportive and symptomatic; corticosteroids are often used, but the other immunosuppressant, such as cyclosporine, may also be required.[8]

CONCLUSION:

A drug allergy should always be suspected in a patient presenting with a whole-body rash and eosinophilia, especially if a new medication was recently started. Allopurinol-induced DRESS syndrome is associated with significant mortality (10%). The use of allopurinol for accepting indications and dose adjustment for renal dysfunction are the only ways to decrease the incidence of the potentially fatal toxic effects of this medication.

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