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An Unusual Etiology of DRESS Syndrome

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Abstract

Observation: Drug reaction with eosinophilia and systemic symptoms (DRESS) is characterized by fever, rash, lymphadenopathy, eosinophilia and/other leukocyte abnormalities and internal organ involvement such as hepatitis. DRESS syndrome is caused by drugs such as aromatic anticonvulsants, allopurinol, sulphonamides, antiretroviral agents and minocycline. This syndrome can occur in conditions other than these usually implicated drugs. In such situations we have to consider other possible etiologies when there are unusual manifestations in DRESS syndrome. This case is highlighted because of such an unusual etiology of DRESS syndrome apart from the usually implicated agents.

Introduction

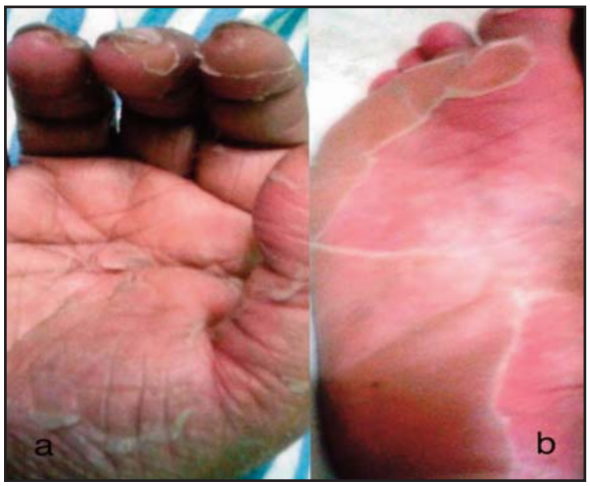
Drug reaction with eosinophilia and systemic symptoms (DRESS) is characterized by fever, rash, lymphadenopathy, eosinophilia and/other leukocyte abnormalities and internal organ involvement such as hepatitis. The usually implicated drugs include aromatic anticonvulsants, allopurinol, sulphonamides, antiretroviral agents and minocycline [**1,2,3,4**]. The reactivation of HHV-6 is also considered by some groups as a component of this condition. DRESS syndrome may occur in other conditions than due to the usually implicated drugs. Hence its better to consider other etiological factors when there are unusual features in DRESS syndrome.

Case Report

A 32 year old female presented in the casualty with fever, intense bodyache, numbness over her finger tips and toes, generalized burning sensation, rash and oral erosions since 3 weeks. She also had associated difficulty in swallowing due to the hot burning pain in her mouth and throat. Following admission in our hospital, the rash progressed in 2 days to generalized scaling and exfoliation. (**Figures 1a and b**).

She gave a past history of low back ache since 2 years for which she was on NSAIDS on and off. Since there was no relief, she decided to take traditional medicines such as Siddha for her ailment. These medicines were in the form of tablets for approximately 1 ½ months, thrice daily. She stopped these medications just 1 week prior to the onset of her complaints.

On examination, she was febrile, generalized maculopapular rash (**Figure 2**), cervical and inguinal lymphadenopathy, facial edema and bilateral pedal edema was present. There was charring, dryness and fissuring of her lips (**Figure 3**).



Figures 1a and b. Pinkish colour and peeling of skin over palm and sole

Oral erosions and muscle tenderness was also present. A clinical diagnosis of drug reaction was suspected, but the unusual symptoms such as peripheral numbness, burning sensation and intense myalgia could not be explained.

On investigations, she was found to have leukocytosis, eosinophilia, elevated liver enzymes. Prior to admission in our hospital she had gone to a local hospital where she was admitted and investigated. Those investigations revealed leukocytosis, eosinophilia (33%), SGOT(101 U/L), SGPT (95 U/L). She was also treated with a short course of steroids. Based on our lab values and clinical prese ntation, a diagnosis of DRESS syndrome was considered but the probable etiological agent beyond Siddha medication couldn't be addressed. She was put on treatment with systemic steroids and other supportive medications.

Following treatment, her skin lesions improved, but the atypical features persisted. These unusual presentations, made us think of an alternative diagnosis. With the history of intake of Siddha medications and with the background knowledge of use of heavy metal powders especially Mercury and lead into these medicines made us suspect the possibility of a heavy metal poisoning. The generalized burning sensation or the "feeling of lying on fire" was the paraesthesia which is a well described neurological manifestation of mercury poisoning. The peripheral numbness was a pointer towards Acrodynia, which is another well established feature of the same. Hot burning pain in her mouth and throat further added to it.

Hence we decided to estimate mercury and lead levels in blood. The interval between estimation and stoppage of medications was about 5 weeks. As expected, her blood mercury levels were above the permissible limits, i.e.10.65ug/dl (Ref.range <3ug/dl). Blood lead levels were normal. Further to establish our diagnosis, the Siddha medicines were also analysed. Mercury level was elevated in them and found to be 10.88ppm in some tablets and 4.43ppm in rest of them, whose permissible limits as per WHO & FDA was 1ppm or less. The tablets revealed the presence of inorganic mercurial salts above the permissible limits.

Hence a final diagnosis of DRESS syndrome due to mercury tainted siddha medication, most likely due to mercury salts directly with associated mercury poisoning was made.

After consultation with the Toxicology Department, chelating agents were decided not to be administered, as mercury has a short half life of just app-

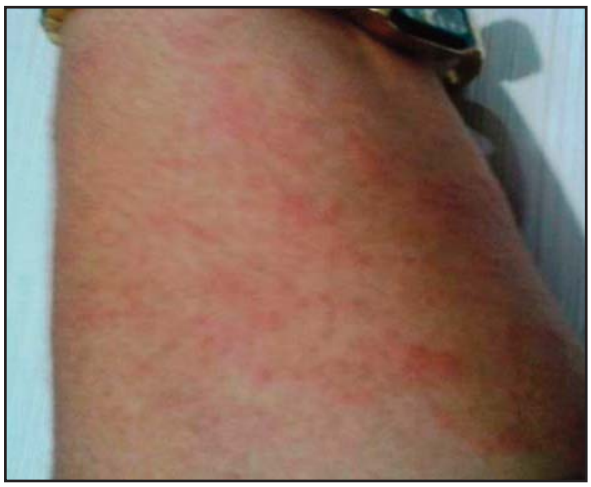


Figure 2. Maculopapular rash on forearm

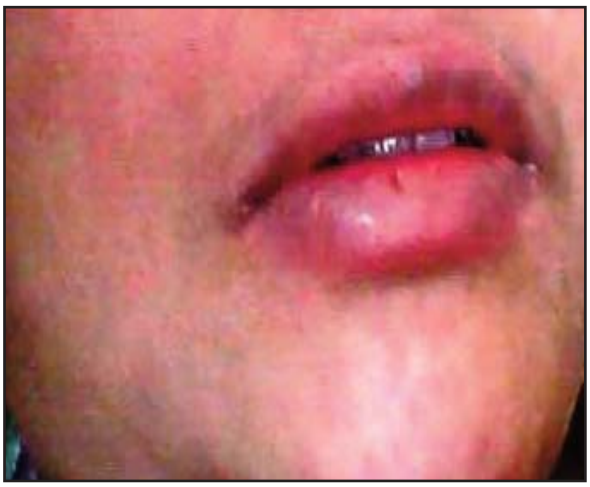


Figure 3. Lip charring and fissuring

roximately 42 days and as the general status and skin condition of the patient was improving.

Discussion

DRESS syndrome can occur in conditions other than the usually implicated drugs, as seen in our case. The addition of heavy metal powders especially Mercury to traditional Medicine systems like Siddha is a well known fact. The proper processing and manufacturing of these medicines usually brings the heavy metal toxicity to negligible levels. Any fault in the processing can result in a much higher content.

Clinical manifestations of inorganic mercury poisoning include acrid metallic taste in the mouth, hot burning pain in the mouth, throat and abdomen which was present in our patient [**5**]. Peripheral numbness was a pointer towards Acrodynia which is a well established feature of the same. Skin manifestations include erythematous rash of palms and soles, desquamation and painful sensitivity to touch which were also present in our patient.

The treatment of Mercury poisoning is usually administration of chelating agents. As Mercury has a short half life of just approximately 42 days, and as the patient was on an improving scale, it was decided not to be administered.

This case is highlighted, as a diagnosis of DRESS syndrome (which satisfied the Regiscar criteria) was made due to mercury tainted Siddha medication, most likely due to mercury salts directly. The lab values of eosinophil count and liver enzymes from our hospital did not reveal high values as she was treated with systemic steroids from a local hospital. This case had odd features like acrodynia, paraesthesia which is not usually seen in a case of DRESS syndrome but are pointers towards mercury toxicity. Hence the etiology of DRESS Syndrome could be attributed to mercurial salts with an associated mercury poisoning. This case is being reported as DRESS syndrome was caused due to an unusual etiology.

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