DRESS Syndrome Secondary to Spironolactone with Atypical Presentation

To Editor,

Drug rash with eosinophilia and systemic symptoms (DRESS syndrome) usually manifests as urticated, maculopapular eruption but vesicles, bullae, pustules, target lesions, and erythroderma can also be seen.[1] Because of these atypical manifestations, sometimes DRESS syndrome can be confused with other severe cutaneous adverse drug reactions (SCARS).

A 58-year-old male, presented with generalized erythema and scaling all over the body for the last 2 weeks. He was a known case of hypertension, coronary artery disease, and chronic obstructive pulmonary disease (COPD) and had received multiple medications (amoxicillin-clavulanic acid, ramipril, clarithromycin, acebrophylline, torsemide, spironolactone, bisoprolol, aspirin, clopidogrel, and glyceryl trinitrate) 1.5 months before. He had also taken over-the-counter analgesics for arthralgia a month earlier. On examination, he had high-grade fever, erythema, and scaling involving almost 80% of the body surface area (BSA) and facial edema [Figure 1a]. Pustules were seen over wrists and groin and crusted erosion on the V-area of the chest [Figure 1b]. Legs and feet showed multiple target lesions [Figure 1c]. Oral and genital mucosa showed multiple erosions with crusting over lips [Figure 1a]. Investigations showed leucocytosis with total leucocyte count of 32,710 per cu mm, eosinophilia of 69%, few atypical lymphocytes on peripheral bold film, and altered renal function test (Blood urea 72 mg/dL, Serum creatinine 1.71). Urine routine microscopy showed proteinuria of 2 + and 24-hour urine protein was 0.7 g. Antinuclear antibody (ANA) and HIV were negative. The liver function tests, blood sugar, and chest X-ray were normal. Skin biopsies taken from a pustule, diffuse erythema, and target lesion showed neutrophilic spongiosis and intraepidermal neutrophil collections, mixed-perivascular eosinophil-rich infiltrate, and interface changes with colloid bodies in the spinous layer, respectively [Figure 2a and b]. The patient was diagnosed as a definite case of DRESS syndrome according to RegiSCAR criteria.[2] The drug provocation test was not done. During admission, patient was continued on clopidogrel, aspirin, torsemide, glyceryl trinitrate, and bisoprolol for his cardiac ailment. The patient was started on oral prednisolone 1 mg/kg in tapering doses with supportive care following which lesions resolved in 6 weeks along with normalization of hemogram and renal function tests [Figure 2c]. The patient was discharged on above cardiac- related drugs and oral steroids were stopped. The patient remained disease-free for nearly 4 months. After 4 months the patient was accidentally prescribed spironolactone again by a physician, which led to reappearance of erythroderma within 2 days of intake of drug along with eosinophilia. Hence the final diagnosis of DRESS syndrome secondary to spironolactone was made.

Spironolactone-induced DRESS syndrome is uncommon, and very few cases have been described in the literature.[3] In an elderly patient with DRESS syndrome, it is important to remember that, albeit rare, spironolactone can be a possible culprit. This case highlights the atypical presentation of DRESS syndrome in the form of pustules, erythema multiforme-like lesions, and genital and oral ulceration. Histopathology showed spongiform subcorneal pustules, which mimicked acute generalized exanthematous pustulosis (AGEP).[4] Renal involvement in DRESS is seen in 11%–28% of patients and is usually manifested as elevation in creatinine, proteinuria, and hematuria.[5] Our patient had increased serum creatinine and proteinuria. Treatment response is faster in AGEP while long term immunosuppressives are required in patients of DRESS syndrome. AGEP doesn't have any long term sequelae, but autoimmune complications can arise after DRESS syndrome.[1] Since treatment and prognoses vary in different SCARS, therefore correct identification of the syndrome becomes crucial.

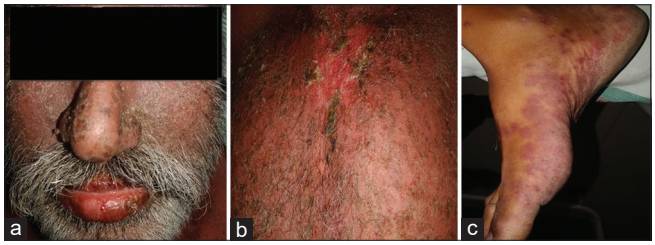

Figure 1: (a) Facial edema with diffuse erythema, scaling and erosions over lips. (b) Multiple erosions with crusting over chest. (c) Multiple Target lesions over foot

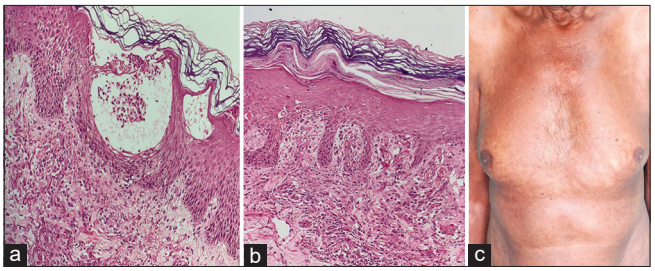

Figure 2: (a) Skin biopsies taken from a pustule shows neutrophilic spongiosis and intraepidermal neutrophil collections. (Hematoxylin-eosin, original magnification ×20). (b) Biopsy from target lesion shows interface changes with colloid bodies in spinous layer and mixed-perivascular infiltrate. (Hematoxylin-eosin, original magnification ×10). (c) Resolution of cutaneous lesions at 6 weeks

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Anupama Bains, S. Varun Rajagopal, Meenakshi Rao[1]

Departments of Dermatology, Venereology and Leprology and [1]Pathology, AIIMS, Jodhpur, Rajasthan, India

Address for correspondence:
Dr. Anupama Bains,
Department of Dermatology, First Floor, OPD Building,
Basni Phase-2, AIIMS, Jodhpur - 342 005, Rajasthan, India.
E-mail: whiteangel2387@gmail.com

References

1. Bouvresse S, Valeyrie-Allanore L, Ortonne N, Konstantinou M, Kardaun SH, Bagot M, *et al.* Toxic epidermal necrolysis, DRESS, AGEP: Do overlap cases exist? Orphanet J Rare Dis 2012;7:72.
2. Kardaun SH, Sidoroff A, Valeyrie-Allanore L, Halevy S, Davidovici BB, Mockenhaupt M, *et al.* Variability in the clinical pattern of cutaneous side-effects of drugs with systemic symptoms: Does a DRESS syndrome really exist? Br J Dermatol 2007;156:609-11.
3. Ghislain PD, Bodarwe AD, Vanderdonckt O, Tennstedt D, Marot L, Lachapelle JM. Drug-induced eosinophilia and multisystemic failure with positive patch-test reaction to spironolactone: DRESS syndrome. Acta Derm Venereol 2004;84:65-8.
4. Orime M. Immunohistopathological findings of severe cutaneous adverse drug reactions. J Immunol Res 2017;2017:6928363.
5. James J, Sammour YM, Virata AR, Nordin TA, Dumic I. Drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome secondary to furosemide: Case report and review of literature. Am J Case Rep 2018;19:163-70.

Access this article online

Website: www.idoj.in

Quick Response Code

DOI: 10.4103/idoj.IDOJ_279_20

How to cite this article: Bains A, Rajagopal SV, Rao M. DRESS syndrome secondary to spironolactone with atypical presentation. Indian Dermatol Online J 2020;11:1022-3.

Received: 19-Apr-2020. **Revised:** 08-Jun-2020.
Accepted: 08-Jul-2020. **Published:** 19-Sep-2020