



DRESS: AN UNUSUAL CASE OF UPPER GASTROINTESTINAL BLEED


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ABSTRACT

A 77-year-old male was admitted to hospital following a four-week course of Piperacillin Tazobactam with drug reaction with eosinophilia and systemic symptoms (DRESS). During his admission, he had a severe upper gastrointestinal bleed (UGIB) and endoscopy revealed a large, circumferential ulcer at the incisura. DRESS is an adverse systemic reaction to a variety of medications, with a high mortality rate. Gastrointestinal bleed has previously been reported in association with DRESS, although this has only been in the setting of cytomegalovirus (CMV) reactivation. We report the first known case of severe UGIB in the setting of DRESS with negative CMV status.

Key words: DRESS, Drug Reaction, Gastrointestinal Bleed, CMV.

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INTRODUCTION

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a rare and potentially life-threatening adverse systemic reaction to medication. Mortality is estimated at 10% and typically due to systemic involvement [1]. Antiepileptic medications are the most commonly reported causes of DRESS [2]. There is a lack of widely accepted diagnostic criteria, with rash, fever, and eosinophilia common among them [3,4].Gastrointestinal bleeds (GIB) can also be a factor, but there is limited data about its incidence. We present the first reported case of severe GIB in DRESS in the absence of cytomegalovirus.

CASE REPORT

A 77-year-old male presented with right upper quadrant pain, elevated alkaline phosphatase, and

pneumobilia on ultrasound. Past medical history was significant for a remote cholecystectomy and he was healthy otherwise, on no medications. Magnetic resonance cholangiopancreatography revealed pneumobilia and two large liver lesions (4.8 x 3.7 cm and 5.6 x 4.4 cm) suggestive of abscesses, one of which extended through the diaphragm to the pleural space. He was admitted and started empirically on Piperacillin-Tazobactam (PipTazo). He underwent endoscopic retrograde cholangiopancreatography with sphincterotomy and removal of a 1.8 cm stone. Interventional radiology could not drain the abscesses and surgical intervention was deferred until antibiotics completed. The patient was discharged feeling well.

He completed four weeks of PipTazo and returned to hospital the week after completion of antibiotics with hypotension, fever, a diffuse morbiliform rash, leukocyte count of 11.6 x 10⁹/L, eosinophils 2.9 x 10⁹/L, and CRP 25.9 mg/L. He was admitted with DRESS, given parenteral corticosteroids, and managed supportively. Notably, a proton pump inhibitor was started on admission.

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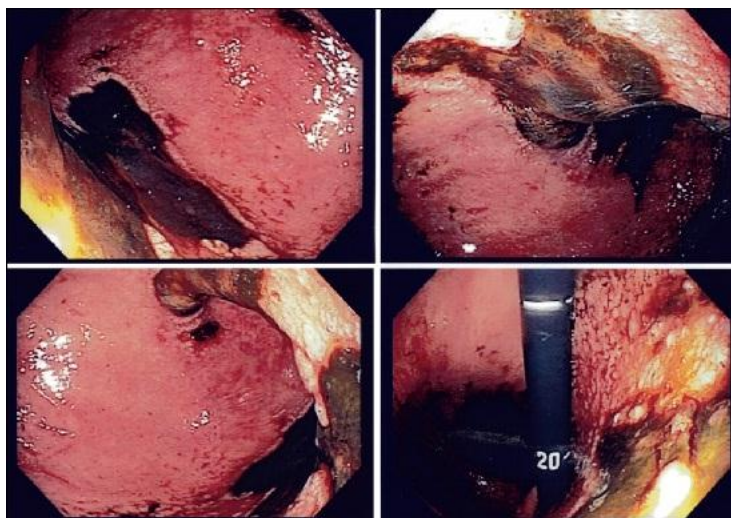
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Abdominal CT on admission showed significant interval improvement of the hepatic abscesses, but pneumobilia remained. Hepatitis B and C panels, as well as antinuclear antibody screen was negative. One week after admission, he became hemodynamically unstable with respiratory distress and was transferred to the intensive care unit. Within an hour of the patient becoming critically unwell, he had three large melena stools and a drop in hemoglobin from 120 to 80 g/L. Urgent endoscopy revealed gastritis and a large, circumferential, Forrest IIc ulcer at the incisura with blood clot overlying most of the ulcer (Figure 1).

Several attempts were made to dislodge the clot but were unsuccessful. He was left on an intravenous pantoprazole infusion and no further intervention undertaken. He was not on any anti-coagulant, anti-platelet, or non-steroidal anti-inflammatory medications. Cytomegalovirus (CMV) polymerase chain reaction (PCR) was negative. Helobacter pylori status was unknown. DRESS improved with the use of high dose corticosteroids. His course was complicated by line sepsis, aspiration pneumonia, thrombocytopenia, and pulmonary embolus, which was a terminal event.

Fig 1. Forward and retroflexed endoscopic views showing a large, circumferential ulcer at the incisura with overlying clot.



DISCUSSION

DRESS is characterized by cutaneous eruption, hematologic abnormalities (eosinophils, atypical lymphocytes), and systemic involvement. Compared to other drug reactions, it has a long latency period of two to eight weeks and a high mortality rate at 10%. Anti-epileptics and allopurinol are the most commonly described causative agents, although beta-lactam antibiotics have been reported as well [2]. Systemic features typically include fever, lymphadenopathy, interstitial pneumonitis, hepatitis, and interstitial nephritis. Many other visceral organs can be involved, with myocarditis, pancreatitis, thyroiditis, encephalitis, myositis, polyneuritis previously described [5]. Hepatitis is the most common organ dysfunction and most patients recover spontaneously once the offending drug is discontinued. The European Registry of Severe Cutaneous Adverse Reactions (RegiSCAR) devised a scoring system for DRESS [6], although there remains a lack of widely accepted diagnostic criteria in the literature. Our patient's RegiSCAR score was 5, giving him a probable diagnosis of DRESS. Management is primarily supportive. The use of systemic corticosteroids in DRESS have not been evaluated in clinical trials. In retrospective observational

studies, corticosteroids have been widely used, both with and without severe organ involvement [1,7]. There has been insufficient evidence to support the use of antivirals or intravenous immunoglobulins in DRESS.

The pathogenesis of DRESS has not been fully elucidated. Associations between human leukocyte antigen and drug hypersensitivity, and genetic deficiencies in detoxifying enzymes leading to accumulation of drug metabolites have been proposed [7]. More recently, reactivation of herpesvirus, particularly human herpes virus 6 (HHV-6) has been implicated. In a study of 100 patients with DRESS, HHV-6 antibody titre was elevated in 62 patients, and associated with more severe disease course [8]. Sequential reactivations of other herpes viruses (HHV-7, Epstein Barr, CMV) have also been detected. CMV is rarely seen in the immunocompetent patient but it has been hypothesized that preceding HHV-6 reactivation may induce CMV reactivation [9].

Gastrointestinal bleeds have been described in DRESS but only in the context of CMV reactivation and CMV gastric ulcers. Asano *et al.* reported two cases of GIB in DRESS, with reactivation of CMV [9]. In these cases, CMV was first recognized in the dermis, before GIB occurred, and CMV reactivation occurred 4-5 weeks after

the onset of DRESS. In our case, CMV PCR (Altona Diagnostics GmbH, Hamburg, Germany) was done after GIB occurred and was negative. Gastrointestinal bleeds are well described in Steven Johnson Syndrome (SJS) and toxic epidermal necrolysis (TEN). Although a biopsy was not obtained in our case, the character of the rash and the presence of eosinophils make SJS and TEN unlikely. Given the size of the lesion, a gastrointestinal malignancy should be included in the differential. Biopsies were not obtained on initial endoscopy and the patient died prior to repeat endoscopy. None of the patient's investigations to date were concerning for malignancy. We propose the pathogenesis underlying GIB and DRESS is similar to other inflammatory conditions predisposing patients to upper gastrointestinal bleeds. To our knowledge, this is the first reported case of GIB associated with DRESS in a

CMV negative patient.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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Nil

CONFLICT OF INTEREST

Nil

REFERENCES

1. Cacoub P, Musette P, Descamps V, Meyer O, Speirs C, Finzi L, *et al.* (2011). The DRESS syndrome: a literature review. *Am J Med*, 124(7), 588–97.
2. Kardaun SH, Sekula P, Valeyrie-Allanore L, Liss Y, Chu CY, Creamer D, *et al.* (2013). Drug reaction with eosinophilia and systemic symptoms (DRESS): an original multisystem adverse drug reaction. Results from the prospective RegiSCAR study. *Br J Dermatol*, 169(5), 1071–80.
3. Shiohara T and Kano Y. (2007). A Complex Interaction Between Drug Allergy and Viral Infection. *Clin Rev Allergy Immunol. Humana Press Inc*, 33(1–2), 124–33.
4. Eshki M, Allanore L, Musette P, Milpied B, Grange A, Guillaume JC, *et al.* (2009). Twelve-Year Analysis of Severe Cases of Drug Reaction With Eosinophilia and Systemic Symptoms. *Arch Dermatol. American Medical Association*, 145(1), 1272–85.
5. Kano Y, Ishida T, Hirahara K, Shiohara T. (2010). Visceral involvements and long-term sequelae in drug-induced hypersensitivity syndrome. *Med Clin North Am*, 94(4), 743–59.
6. Kardaun SH, Sidoroff A, Valeyrie-Allanore L, Halevy S, Davidovici BB, Mockenhaupt M, *et al.* (2007). Variability in the clinical pattern of cutaneous side-effects of drugs with systemic symptoms: does a DRESS syndrome really exist? *Br J Dermatol*, 156(3), 609–11.
7. Choudhary S, McLeod M, Torchia D, Romanelli P. (2013). Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) Syndrome. *J Clin Aesthet Dermatol. Matrix Medical Communications*, 6(6), 31–7.
8. Tohyama MK, *et al.* (2010). Association of human herpesvirus 6 reactivation with the flaring and severity of drug-induced hypersensitivity syndrome. *Br J Dermatol*. 157(5), 201.
9. Asano Y, Kagawa H, Kano Y, Shiohara T. (2009). Cytomegalovirus disease during severe drug eruptions: report of 2 cases and retrospective study of 18 patients with drug-induced hypersensitivity syndrome. *Arch Dermatol.*, 145(9), 1030–6.

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