**Clinical Presentation**

A previously healthy 28 year-old man developed diffuse arthralgias and palpable purpura of his distal extremities following an upper respiratory tract infection. Biopsy of the skin lesion revealed leukocytoclastic vasculitis (LCV) with IgA deposition prominence on immunofluorescence, consistent with Henoch–Schönlein purpura (HSP). Infectious and rheumatologic etiologies were explored as potential triggers for HSP, but work-up was negative except for throat culture demonstrating Group C streptococcus, for which he was started on cephalexin. Additionally, dapsone was initiated for treatment of LCV. Several weeks later, the patient developed fevers, myalgias, anorexia, and a progressive morbiliform rash, for which he presented to the emergency department.

On admission, the patient was febrile, tachycardic, and mildly hypoxemic. Exam was notable for diffuse lymphadenopathy, expiratory wheeze, jaundice, and a diffuse morbiliform skin rash. Laboratory data was notable for new leukocytosis with atypical lymphocytosis and marked peripheral eosinophilia, elevated transaminases, direct hyperbilirubinemia with preserved synthetic hepatic function, proteinuria, hematuria, and mildly elevated methemoglobin level. Out of concern for drug reaction, cephalexin and dapsone were discontinued on admission and the patient was started on high-dose corticosteroids.

Hospital course was initially marked by intermittent high-grade fevers and persistent mild hypoxemia. Exam notable for diffuse lymphadenopathy, expiratory wheeze, jaundice, and a diffuse morbiliform skin rash. Laboratory data notable for new leukocytosis with atypical lymphocytosis and marked peripheral eosinophilia, elevated transaminases, direct hyperbilirubinemia with preserved synthetic hepatic function, proteinuria, hematuria, and mildly elevated methemoglobin level. Out of concern for drug reaction, cephalexin and dapsone were discontinued on admission and the patient was started on high-dose corticosteroids.

On one week of high-dose steroid therapy, symptoms and signs began to abate, including resolution of fever, improvement in skin rash, down trending liver tests, and improvement in oxygen saturation. Several months later, all signs and symptoms had resolved with the exception of some mild hematuria, which is continuing to improve.

**Learning Objectives**

- To identify features of dapsone hypersensitivity syndrome (DHS) as a presentation of DRESS
- To recognize the implications on future therapeutic options for patients with DHS

**Discussion**

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a drug-induced hypersensitivity that typically occurs two to six weeks after the initiation of an offending medication. It is a multi-system syndrome that causes a constellation of signs and symptoms that may include rash, lymphadenopathy, hematologic abnormalities of eosinophilia and atypical lymphocytosis, and inflammation of the lungs, liver, and kidneys. Dapsone hypersensitivity syndrome, unlike DRESS caused by most other medications, also often elevates the methemoglobin level. Management of DRESS is primarily supportive with removal of the offending agent. In patients with severe organ involvement, particularly in those with pulmonary or renal involvement, the use of systemic corticosteroids is recommended. Most patients will have complete recovery weeks to months after removal of the offending drug.

There is potential for cross-reactivity between dapsone and sulfonamide antibiotics, given the sulfa moiety, so all of these agents should be listed as an allergy. However, cross-reactivity should not occur with non-aromatic amines (thiazides, furosemide, acetazolamide, sulfonylureas).

**References**

- Rojou JC. DRESS. In: UpToDate, Mockenhaupt (ed). UpToDate. Walthm , MA 2013.