中文題目：疑似血管免疫芽細胞性 T 細胞淋巴瘤的藥物疹合併嗜伊紅血症及全身症狀

英文題目：Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS Syndrome) Mimicking Angioimmunoblastic T-Cell Lymphoma

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Background

Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome) is a rare, life-threatening, drug-induced hypersensitivity reaction that might leads to skin eruption, hematologic abnormalities, lymphadenopathy, and internal multiorgan involvement. Here in, we report a 30-year-old man with DRESS syndrome who presented symptoms and signs mimicking lymphoma and the histological findings resembled angioimmunoblastic T-Cell Lymphoma (AITL).

Case Presnetation

A 30-year-old, previously healthy male patient was sent to our emergency department with the presentation of spiking fever and erythematous morbilliform rash, having lasted about 1 weeks. The skin eruption appeared over face, upper part of the trunk and extremities initially, which later encompassed the entire surface of the skin. Associated symptom included general malaise, watery diarrhea, and night sweats. On examination, he had a body temperature of 39.6°C, a blood pressure of 127/86 mmHg, a pulse rate of 130 beats per minute, a respiratory rate of 20 breaths per minute, and an oxygen saturation of 96% on room air. A physical examination revealed diffuse itchy erythematous maculopapules on erythematous patches over face, trunk, upper extremities and upper part of lower extremities involves more than 50 percent of the body surface area. Besides, he also had bilateral inguinal lymphadenopathy and splenomegaly. There was no anal or genital ulcers found. A detailed medication history was reviewed. The patient confirmed having taken quinolone 1 months and 1 weeks before the onset of exanthema, respectively, at local medical department. The initial diagnosis was drug reaction with eosinophilia and systemic symptoms (DRESS syndrome). Topical and systemic steroids (methylprednisolone 40 mg) were prescribed and he was admitted. After admission, his laboratory tests showed mild leukocytosis (10.6 10^3/μL) with atypical lymphocytes and Burr cell (1+) in the peripheral blood smear, anemia (Hb 13.3 g/L), eosinophilia (742 /μL), lymphopenia (742 /μL) and mild decrease in platelet count (132 10^3/μL). Liver function panel tests revealed elevation in aspartate aminotransferase (672 U/L), alanine aminotransferase (1305/L), LDH (828 U/L), and total bilirubin (1.6 mg/dL). Epstein-Barr virus (EBV) PCR, cytomegalovirus (CMV) PCR, human herpes virus (HHV)-6 PCR and hepatitis A, B ,C virus serology tests were all negative. There were no supporting microbiological evidences for infection. Chest radiography showed mild right pleural effusion. An abdominal ultrasound confirmed splenomegaly (18.3cm in diameter without focal mass lesion) with minimal ascites. A Skin biopsy was later performed, and revealed normal appearing epidermis with moderately dense perivascular and perifollicular lymphohistiocytic infiltrate in the upper dermis with some scattered neutrophils, eosinophis and extravasation of erythrocytes in the papillary dermis, which was compatible with drug eruption histologically. Despite clinical improvement after steroid use, his originally complained night sweats remained. In view of the course of the disease, as well as thoracic and abdominal CT scans demonstrated prominent lymph nodes in neck, mediastinal region, bilateral axillary regions with small

lymph nodes in para-aortic region, aortocaval region and bilateral inguinal region, we directed our suspicion towards a hematological disease. His bone marrow aspiration revealed normocellular marrow with eosinophilia without atypical lymphocyte found. However, his bone marrow biopsy showed interstitial infiltration of atypical lymphocytes. These cells were positive for CD3 and negative for CD20 and PD-1. EBER in situ hybridization was negative. Neither dysplasia, nor evidence of excess of blast or myelofibrosis was noted. For confirmation, a right inguinal lymph node excision biopsy was conducted, showing sections of lymph node revealing partial effacement with small and medium-sized lymphoid cells. Reactive eosinophils and increased vessels were also present. These atypical lymphoid cells are positive for CD2, CD3, CD4, CD7, receptor βF and negative for CD8, CD10, BCL6, CD20, PD-1 and EBER in situ hybridization. The CD5 staining shows dim expression. The CD21 staining highlights only a few dendritic cells while the CD30 staining highlights some immunoblasts. Also, CD68 stains some histiocytes with hemophagocytosis. Since the histopathologic examination of bone marrow and lymph node biopsy both demonstrated atypical T-cell proliferations with eosinophilia, resembling morphology with AITL, further TCR genes rearrangement analysis was done. The results were both polyclonal for β chain (PCR A_Vβ-Jβ*9; PCR B_Vβ-Jβ*4; PCR C_Dβ-Jβ) and γ chain (PCR A_Vγ1f&10+Jγ; PCR B_Vγ9&11+Jγ). Finally, the diagnosis of DRESS syndrome was made.

Conclusion

DRESS syndrome, a T-cell-mediated, delayed-type IV, potentially lifethreatening hypersensitivity reaction with maculopapular exanthema, fever, internal organ involvement, atypical lymphocytes in peripheral blood, and generalized lymphadenopathy, poses a challenging differential diagnosis to AITL. The histopathologic feature of DRESS syndrome demonstrate atypical T-cell proliferations with eosinophilia, resembling morphology with AITL. Further analysis of T-cell gene rearrangement might help clinician to diffentiate DRESS syndrome from AITL.