Pseudo t-cell lymphoma with clonal expansion related to hypersensitivity to amoxicillin

T-cell lymphoproliferation are less frequent than B-cell and have some particular clinical features.[1] We present a patient presenting with a reversible cutaneous and blood T-lymphocyte clonal expansion this case may be closed to the drug hypersensitivity syndrome.

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Case report

A 28 year old man was referred for suspicion of T-cell lymphoma. Ten days after the prophylactic prescription of amoxicillin-clavulanic acid, he presented a pruritic skin eruption. Antibiotic was discontinued and, despite corticosteroids (1 mg/kg/day) cutaneous lesions worsened. He was in good general conditions with no B symptoms. Examination found a disseminated monomorph papulonodular cutaneous eruption predominantly on the trunk, the face, upper limbs and the base of lower limbs with a face edema. Thoracoabdominal CT scan was normal. Blood smears showed a lymphocyte count of 62.000/mm^3 made of small cells with irregular nuclei suggesting lymphoma but without Sezary cells. Immunophenotyping was consistent with activated T-cells (CD3:97%, CD5:84%, CD7:32%,CD8:88%, CD4:0, HLADR : 96%). Transaminase levels were within normal range and LDH level at 1.5 times normal value. Cutaneous histology showed a lymphoid dermal infiltrate including mainly small non-epidermotropic cells mixed with medium-size cells bearing a clear nucleus without atypical cytology. Immunohistochemistry showed that the lymphocytes were CD3 positive (CD8: 40% and rare CD30 positive cells). Southern blot with Vh/γ TCR probes found the same massive T-cell clone in blood and skin. Blood cytogenetic study was performed on 89 mitosis and found many abnormalities on 24 mitosis, such a t(16 ;17) (16 mitosis), del (X), add(6), inv(10). No treatment was given and a close follow-up evaluation was performed. Twelve days after the first blood examination, there was a 50% reduction in lymphocytosis. Cutaneous lesions disappeared within10 weeks with a WBC count of 10,300/mm^3 (5,560 lymphocytes/mm^3). Southern blot found the persistence of a minor T-cell clone in the blood and the t(16;17) was still detectable by FISH. After one year of follow-up, clinical status was normal as well as blood counts, no clone was detected by southern blotting and cytogenetics tests.

Discussion

Drug-induced hypersensitivity syndrome (DHS) is defined as a severe, specific acute reaction to a drug consisting of fever, rash and often arthralgia, adenopathies.[2] Hematological abnormalities can be observed such as eosinophilia, hyperlymphocytosis with atypical lymphocytes.[2] The diagnosis of hypersensitivity to amoxicillin was retained in our observation for the following reasons: occurrence of skin eruption 10 days after initiation of amoxicillin-clavulanic acid treatment, pruritus, increase in circulating lymphocytes, previous toxicity to amoxicillin and improvement after drug withdrawal. We found only three observations of drug-induced pseudolymphoma where a T-cell clone was found, these cases involved Phenitoin, Dapsone and Enalapril.[3,4] The presence of a T-cell clone after amoxicillin is exceptional regarding to the wide use of this antibiotic and the physiopathology is not known. As in other observations of DHS we did not observed in our case the occurrence of a lymphoma despite the morphological features and the cytogenetic abnormalities at first diagnosis.

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