Haematologica 2002; 87:(01)ECR07

Choroiditis as systemic manifestation of a Sweet's syndrome associated with myelodysplasia: a case report

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A significant proportion of patients with the malignancy-associated Sweet's syndrome (SS) have extracutaneous involvement. We report the case of a patient with myelodysplastic syndrome (MDS) who developed SS. During the course of the disease, he presented ocular symptoms and a diagnosis of chroroiditis was made. Treatment with corticosteroids resulted in improvement of both cutaneous and ocular features. This extracutaneous association with SS is a not previously described systemic manifestation of such Sweet's syndrome.

Sweet's syndrome or acute febrile neutrophilic dirmatosis was initially described in 1964.[1] This disease is chracterized by the presence of fever, elevated erythrocyte sedimentation rate, neutrophilia, and painful erythematous plaques. The link between neoplasia and SS is widely described in literature and it has been established that around 20% of these patients present with it, hematologic neoplasias being the most frequent.[2] Associated ocular pathology is common, appearing in 18% of SS patients[3] mainly presenting conjunctivitis and/or episcleritis.[4] We present a case report of SS-associated choroiditis, a circumstance which has not been previously described in literature.

A 60-year old patient with a past history of high blood pressure and alcoholic liver disease was to hospital due to fever, pain in the right hypochondrium, and macular and papulous lesions on the trunk and lower extremities. Biochemistry: Urea: 54mgr/dL, uric acid: 10.4 mg/dL, AST: 26 Ul/L, ALT: 20 Ul/L, gamma GT: 51 UI/L, alkaline phosphatase: 118UI/L. Blood count: hemoglobin: 9.5 mg/dL, Hematocrit: 27%, platelets: $38x10^9$/L, leukocytes: $0.9x10^9$/L (neutrophils: 49%, eosinophils: 1%, lymphocytes: 44%, monocytes: 6%), with dyshematopoietic features in the peripheral blood. Bone biopsy and bone marrow aspiration with evident dyshematopoietic features, reticulin fibrosis, and presence of 1.4% of type-I blasts and 1.8% of type-II blasts. *Diagnosis:* Myelodysplastic syndrome, simple refractory anemia according to the FAB classification.
In June 1997, the patient presented with fever and skin lesion exacerbation on trunk and head. He was seen by the Department of Dermatology and a skin biopsy was performed revealing superficial and deep lymphocytic dermatosis. He began corticosteroid treatment with prednisone 50 mg/day following a decreasing pattern for one month with a favorable effect on the cutaneous symptoms. The patient remained hematologically stable for one year until July 1998, when he came back due to anemic syndrome, clinical and cutaneous lesion relapse. A new bone marrow aspiration was performed, revealing MDS: refractory anemin with an excess of blasts according to FAB classification. Skin biopsy showed acute febrile neutrophilic dermatosis with remarked edema with papillary body and leukocytoclasia, according with Sweet's syndrome. Prednisone treatment was applied, with doses of 90 mg/day and later 20 mg/day due to an increase of glucose blood levels. This treatment was applied for four months with a favorable effect on the skin lesions. In September 1999, corticosteroid treatment was reinitiated at a dose of 20-mg/day due to skin worsening. In December of the same year, the patient comes back due to non-focal fever syndrome and skin lesions identical to those of previous admissions. During this admission, he had blurred vision, and was examined by the Department of Ophthalmology: Pupils react to light and accommodation. Visual acuity: right eye (RE): 0.3; left eye (LE): 0.4. Annexa and anterior pole: LE: Tyndall (+), phacosclerosis in both eyes, normal extrinsic motility. Tonometry: RE: 16, LE: 18. Fundi: LE: Multiple choroiditis focus in

posterior pole, round bleedings in lower zone with white center in one of them (Roth's spot) and peripapillary venous ingurgitation in both eyes. At that time the diagnosis was LE choroiditis, probably caused by an infection. Chest X-ray was performed, but showed neither parenchymatous condensation nor insterstitial pattern: bronchoscopy with bronchial aspiration and culture gave negative results; negative blood and urine-cultures; serologies of syncytial respiratory virus, influenza A and B, mycoplasma, Coxiella, Chlamydia, B19 parvovirus, IgG/IgM: negative results; negative herpes-virus PCR. Wide-spectrum antibiotic treatment and predisone at 40-mg/day doses was established. Fever disappeared, and skin and ocular signs improved in parallel. The patient was discharged on corticosteroid treatment at 30-mg/day. The patient returned to hospital twenty days later because of a pneumonica, respiratory and renal function deterionation, dying one week later in the Intensive Care Unit because of multiple organ failure.
SS is charaterized[5] by the presence of two major criteria: characteristic skin lesions and neutrophilic dermal infiltrate vasculitis-absent, and two other minor criteria among the following: 1) past history of fever or infection, 2) fever, arthralgia, conjunctivitis, or underlying neoplasm, 3) leukocytosis, 4) good response to systemic corticosteroid treatment and not to antibiotherapy, 5) elevated ESR. The pathogenesis of this entity is still unknown. Inappropriate cytokine secretion has been suggested to play a role.[6]

SS associated with neoplasias, particularly of hematologic-type, is firmly established in literature[2,3,7] reaching figures of 85%[2] in this case. The most frequent hematologic neoplasia is acute myeloblastic leukemia, which may appear in up to 50% of cases,[2,3] followed by lymphomas (Hodgkin's and non-Hodgkin's lymphomas) and MDS. Around 50% of patients with hematologic neoplasia- associated SS present with accompanying systemic symptoms such as: arthralgia, ocular or oral mucosa pathologies;[5] between 50% and 70% of cases present a recurrent episode, generally occurring when steroid treatment is suddenly interrupted, or if the underlying hematologic pathology is aggravated.[2,3] Ocular pathology, mainly conjunctivitis and iritis, has been described in 18-23% of SS patients.[3,5] Another less frequent complication is inflammatory glaucoma.[8] There is no description of any case associating SS and choroiditis until now. Choroiditis or posterior uveitis is a completely asymptomatic choroidal inflammation when the macula is not affected. When there is a certain degree of associated retinitis, secondary blurred vision may appear when cells are present in vitreous humor. When the macula is affected, central vision loss and metamorphopsia are typical symptoms. The etiology may be infectious (toxoplasmosis, cytomegalovirus, histoplasmosis, tuberculosis, toxocariasis, candidiasis, syphilis) or associated with systemic diseases such as: sarcoidosis, Behçet's disease, Vogt-Koyanagi-Harada's disease. Lesions may be focal (individual or multiple lesions) or diffuse, and can be accompanied by adjacent bleeding, vascular dilatation, or inflammatory membranes. Treatment is based on systemic corticosteroid administration, to which, depending on etiological suspicion, the corresponding antibiotic agent is added.[9] In our case, negative results from bronchial, blood, and urine cultures were checked, as well as those from serologies regarding Toxoplasma and virus, which seems to exclude the possibility of an infectious origin to the ocular pathology. Likewise, the absence of further signs and symptoms suggests the absence of those systemic diseases whose association with choroiditis is well established. Skin lesion exacerbation was simultaneous with visual disturbance, coinciding chronologically with the administration of subtherapeutic doses of corticosteroids.
In conclusion, the absence of our infectious etiology or another kind of systemic etiology, paralel bahevoiur of skin and visual symptoms, as well as the response of both of them to corticostereoid treatment clearly seems to establish the association of the chroiditis with SS, as a not previously described systemic manifestation of this disease.

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