A Flare-up of Behcet's Disease with Sweet's Syndrome: A Case-based Review

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ABSTRACT

Behcet's disease (BD) is a systemic vasculitis of unknown aetiology, characterized by relapsing episodes of oral aphtous ulcers, genital ulcers, ocular lesions and skin lesions. Sweet's Syndrome is characterized by fever, neutrophilia, tender erythematous skin lesions, and histopathologic evidence of a dense neutrophilic infiltration in the papillary dermis without vasculitis and it is one of the less common skin lesions of Behcet's disease. We present a case of 44-year old woman with Behcet's disease who had erythematous and painful eruptions on her hands and forearms. She had been diagnosed as Behcet's disease after oral aphtous ulcers, genital ulcers and positive pathergy test seven years previously. An incisional biopsy of an erythematous lesion involving the forearm and laboratory work-up were performed. Based on history, clinical findings, laboratory data and histopathological examination, the patient was diagnosed as Sweet's Syndrome. Behcet's disease may manifest Sweet's Syndrome a long-time after its onset even in the absence of cardinal symptoms.

Keywords: Behcet's disease, flare-up, manifestation, Sweet's Syndrome

Un Brote de la Enfermedad de Behçet con Síndrome de Sweet: una Revisión Basada en un Caso

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RESUMEN

La enfermedad de Behçet es una vasculitis sistémica de etiología desconocida, caracterizada por episodios de recaídas de úlcera aftosa oral, úlcera genital, lesiones oculares y lesiones cutáneas. El síndrome de Sweet se caracteriza por fiebre, neutrofilia, lesiones eritematosas cutáneas dolorosas, y evidencia histopatológica de una densa infiltración neutrofílica en la dermis papilar sin vasculitis, y es una de las lesiones de piel menos común de la enfermedad de Behçet. Presentamos un caso de una mujer de 44 años con enfermedad de Behçet que tenía erupciones eritematosas y dolorosas en las manos y antebrazos. La paciente había sido diagnosticada con la enfermedad de Behçet después de presentar úlcera aftosa oral, úlcera genital y resultar positiva a la prueba de patergia siete años atrás. Se le realizó una biopsia incisional de una lesión eritematosa que comprendía el antebrazo y se le hicieron pruebas de laboratorio. Sobre la base de la historia, hallazgos clínicos, datos de laboratorio y examen histopatológico, la paciente fue diagnosticada con síndrome de Sweet. La enfermedad de Behçet puede manifestar el síndrome de Sweet largo tiempo después de su aparición, incluso en ausencia de síntomas cardinales.

Palabras claves: Brote, manifestación, enfermedad de Behçet, síndrome de Sweet

West Indian Med J 2016; 65 (3): 575

INTRODUCTION

Behcet's disease (BD) is a multisystemic inflammatory process of unknown aetiology, characterized by relapsing episodes of oral aphtous ulcers, other skin lesions and ocular lesions (1). Sweet's Syndrome (SS) is characterized by a variety of symptoms, clinical and histopathological findings, which include fever, neutrophilia, erythematous and painful skin lesions and diffuse neutrophilic infiltrate in the dermis (2, 3). Although rare, SS-like lesions are one of the mucocutaneous manifestations of BD (1, 4). Herein, we report a patient with SS who had already been diagnosed as BD.

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DOI: 10.7727/wimj.2014.309

CASE REPORT

A 44-year old female patient presented with erythematous and painful eruption on her hands and forearms which had been present for three weeks. Dermatologic examination revealed erythematous and well-demarcated plaques which were painful with palpation on her hands and forearms bilaterally (Fig. 1).

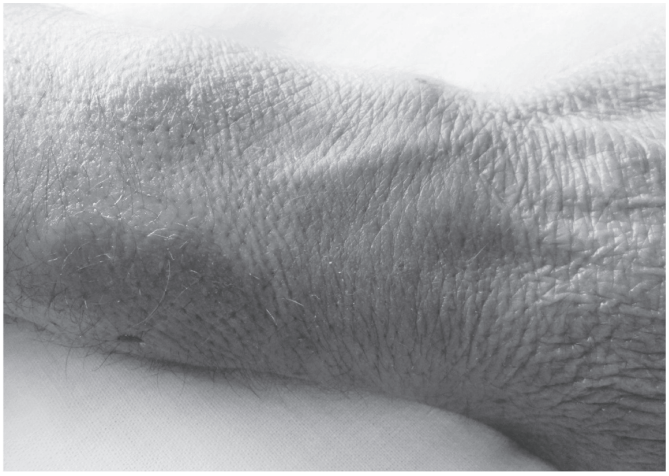

Fig. 1: Erythematous plaques on the forearm.

The patient's medical history included Behcet's disease that had been diagnosed after oral aphtous ulcers, genital ulcers and positive pathergy test seven years ago. Colchicine had been prescribed for the patient, but it was learnt that she had stopped taking medication one and a half years previously. Her physical examination was normal and family history was noncontributory.

An incisional biopsy of an erythematous lesion involving the forearm was performed with pre-diagnoses of SS, sarcoidosis and fixed drug eruption. Histopathologic examination revealed acanthosis in the epidermis, and dense polymorphnucleated leukocyte infiltration in the dermis with papillary oedema without vasculitis (Fig. 2).

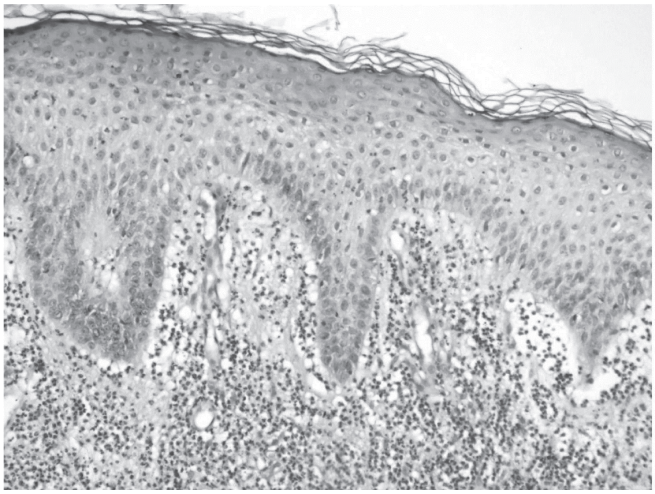

Fig. 2: Oedema and dense polymorphnucleated leukocyte infiltration in papillary dermis (haematoxylin-eosin, original magnification: X 100).

Laboratory data including complete blood cell counts, serum biochemistry analysis, urinanalysis, serum calcium, and angiotensin converting enzyme values were within normal limits except elevated serum C-reactive protein (30 U/mL) and erythrocyte sedimentation rate (47 mm/h). Chest radiography was normal and the tuberculin skin test was negative.

Pathergy test was found to be positive (Fig. 3) and ophtalmologic examination did not reveal eye involvement for Behcet's disease. Abdominal ultrasonography, mammography and gynaecologic examination were performed for malignancy investigation and found to be normal and tumour markers were negative.

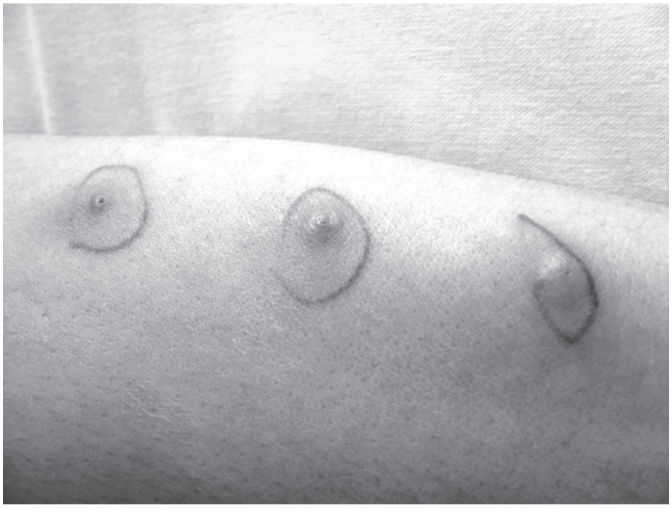

Fig. 3: Positive pathergy test.

Based on history, clinical findings, laboratory data and histopathological examination, the patient was diagnosed as SS. After the diagnosis was established, oral prednisolone 50 mg/day and colchicine 1.5 mg/day were started. The corticosteroid treatment was tapered 10 mg for five weeks and the patient's lesions showed a rapid and marked improvement.

DISCUSSION

Behcet's disease is a chronic relapsing, multi-system inflammatory disorder of unknown aetiology with complicated and diversified clinical features of mucocutaneous lesions and ocular, vascular, articular, gastrointestinal, urogenital, pulmonary and neurological involvement (5). The manifestations and the combination of clinical symptoms are very heterogenous from patient-to-patient (1). Sweet's Syndrome is characterized by fever, neutrophilia, tender erythematous skin lesions, and histopathologic evidence of a dense neutrophilic infiltration in the papillary dermis without vasculitis and can be classified as idiopathic or classical, associated with malignancy or drug-induced (2, 6).

Several conditions have been associated with SS. The main infectious conditions associated with this syndrome are of the upper respiratory tract, and Behcet's disease, inflammatory bowel disease, erythema nodosum, rheumatoid arthritis,

sarcoidosis, relapsing polychondritis, Grave's disease and hashimato's thyroiditis are also associated with SS (3, 6).

On the other hand, the most common presenting symptoms of the BD are mucocutaneous features. Recurrent oral aphthous ulcerations and genital ulcerations are the most common. Other skin lesions, such as erythema-nodosum like lesions, papulopustular lesions, superficial thrombophlebitis, pathergy reaction, pyoderma gangrenosum-like lesions, SS-like lesions, and erythema multiforme can be observed in about 80% of the patients with BD (1).

Sweets syndrome-like lesions are rarely seen in patients with BD, and if present, are usually fewer in number (4). They are seen as painful erythematous nodules and plaques, associated with fever and leucocytosis. Sometimes, they may be pustular. Sweets syndrome-like lesions can be seen on the face, neck and extremities (1).

Neutrophils are considered to play a central role in the pathogenesis of both SS and BD, but the clinical phenotype may differ because of the differences in genetic background including HLA type (7). The frequency of HLA B51 is significantly higher in BD, and HLA B54 and Cw1 are significantly higher in SS (8). The lesions of SS demonstrate neutrophilic infiltration, or perivascular and periadnexial inflammatory infiltrate of lymphocytes, histiocytes, and neutrophils in the dermis. In some cases, vasculitis may also be seen (1). Behcet's disease is histopathologically characterized by vasculitis and vascular thrombi and it is also categorized among neutrophilic dermatoses (6, 9).

The identification of SS-like lesion as a symptom of BD was first made by Mizoguchi *et al* (10). Behcet's disease and SS have many similarities. Some patients with SS had oral aphthae, genital ulcers, erythema nodosum-like eruptions, or iridocyclitis, which are all frequently observed in BD (11). In general, the ocular and mouth lesions are less common and less severe in SS (12). In SS, most symptoms appear at the same time, while one or more symptoms of BD appear in the acute phase. After the initial symptoms appear, it takes several years for other symptoms to ocur in BD, which is a chronic inflammatory disease with remissions and relapses (10). Compatible with the literature, SS appeared as a mucocutaneous finding seven years after the the initial symptoms of BD in our patient.

Tsunemi *et al* reported a patient with simultaneous presentation of features of BD and SS, and emphasized that SS was considered to be a related inflammatory disorder (13). In one study, ten patients with BD who had SS-like skin lesions were presented. It was reported that all the patients had already had BD for several years and they had other characteristic manifestations of BD such as oral ulceration, genital ulceration, erythema nodosum and neurological symptoms. Of the ten patients, four had fever, eight had arthralgia, and seven had positive pathergy tests (14). Our patient who was not taking systemic medication for one and a half years had strong pathergy test positivity as well as the skin manifestations of SS.

The epidemiological characteristics of SS and its related conditions classify this disorder among the diseases that relate to hypersensitivity reactions to infectious, inflammatory, drug, or tumour cell antigens (15, 16). Cytokines, dermal dendrocytes, and auto-antibodies might also have a role in the pathogenesis (16). Systemic corticosteroids are the gold standard of therapy for SS. They provide prompt relief of cutaneous and systemic symptoms (17).

Symptoms of BD which is an inflammatory disorder may not be present at the same time and manifestation of other symptoms can be seen after years (18). It should be kept in mind that BD may manifest SS a long-time after its onset even in the absence of cardinal symptoms. In conclusion, we presented the patient who had SS manifesting as a single symptom seven years after the onset of BD.

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