Neutrophilic Eccrine Hidradenitis in a Patient with Behçet's Disease

Pedro Mercader-García, Juan Jose Vilata-Corell, José Pardo-Sanchez and Jose Miguel Fortea-Baixauli
Dermatology Service, Hospital General Universitario, Av/Tres Cruces, S/N, ES-46014 Valencia, Spain. E-mail: pmercader@aedv.es
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Sir,

Neutrophilic eccrine hidradenitis (NEH) was first described by Harrist et al. in 1982 (1). This disease is clinically characterized by erythematous plaques or papules of variable size, though purpuric or pigmented lesions have also been reported. The lesions may be painful or asymptomatic, and are predominantly distributed on the upper part of the trunk.

Histologically, NEH is characterized by an aseptic infiltrate of polymorphonuclear cells (PMN) selectively distributed around the eccrine sweat glands. To date, most cases described in the literature have been associated with haematological neoplasms subjected to chemotherapy, though cases associated with neoplasms before treatment have also been reported (1). NEH has also been observed in patients with diseases such as HIV infection (3) or actinic reticuloid syndrome (4), and even in healthy individuals (5). Recently, two cases of NEH have been diagnosed associated with Behçet's disease (BD) (6, 7). The present study describes a new case of this association.

CASE REPORT

A 43-year-old woman had 3 years previously been diagnosed as BD based on the development of recurrent oral and genital ulcerations along with erythema nodosum-type lesions and arthralgia. The patient had not sought medical help for one year, and was not receiving any treatment. She reported to hospital with a 15-day history of high fever (up to 39°C), malaise and joint pain associated with warm, painful and erythematous nodules on the face (Fig. 1). The blood tests showed slight leucocytosis (14,300 cells/mm^3; 64.7% PMNs), the chest X-rays and rest of the physical examination were normal. A clinical diagnosis of Sweet's syndrome was established, and treatment was started with prednisone 30 mg in a decreasing dosing regimen, followed by resolution of the lesions in 48 h.

A biopsy taken from the forehead at the time of admission revealed degeneration of the eccrine sweat gland epithelium, surrounded by a neutrophilic and lymphocytic infiltrate without involvement of the fat lobule or septa (Fig. 2). PAS and Giemsa staining proved negative. NEH was diagnosed based on these observations. Over 9 months of follow-up, the patient has developed no new lesions or associated disorders. Current treatment consists of colchicine 1 mg/24 h p.o. and prednisone 10 mg/48 h p.o. for BD.

DISCUSSION

NEH is an infrequent disease. Bachmeyer & Aractingi (8) found only 51 cases in the Medline database between 1982 and 1998. Most of these cases corresponded to chronic myeloid leukaemia (CML), though other haematological (Hodgkin and non-Hodgkin lymphomas, and chronic lymphocytic leukaemia) and non-haematological neoplasms were also involved (testicular carcinoma, Wilms' tumour, lung and breast cancer and osteosarcoma). Eighty-four percent of these patients were receiving chemotherapy (CT) – cytarabine and anthracyclines being the most frequently used drugs.

The frequent association of NEH with tumour processes subjected to CT suggested the former as being a consequence of direct cytotoxicity of the

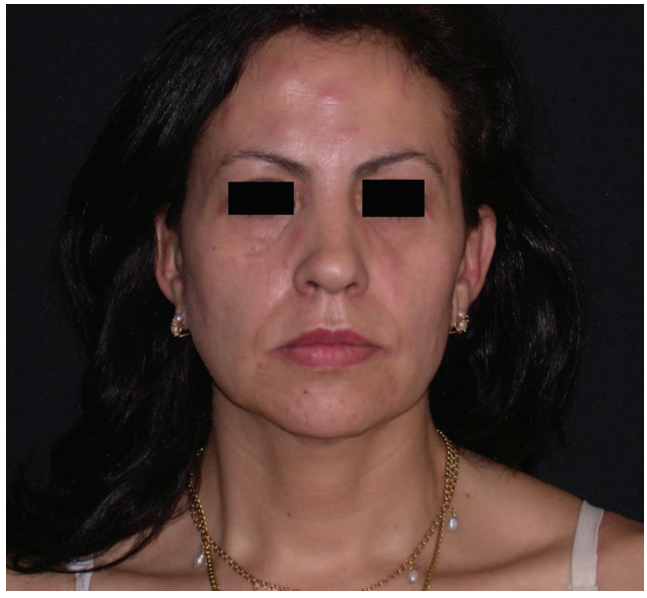

Fig. 1. Erythematous nodules affecting the face.

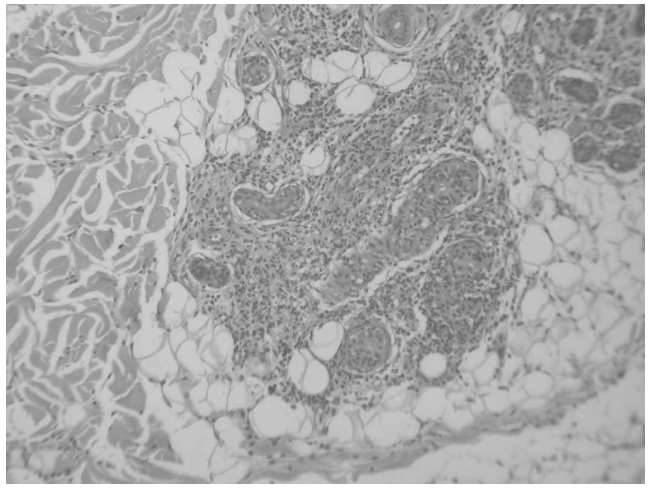

Fig. 2. Neutrophils and lymphocytes around eccrine gland with necrosis of epithelial cells.

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chemotherapeutic agent secreted in sweat (9). However, cases of NEH have also been described in patients with leukaemia before CT, as well as in patients with HIV infection, actinic reticuloid syndrome and even in healthy individuals. These observations suggest that NEH may be included among the neutrophilic dermatoses; the detection of NEH in patients with BD would support this idea.

The neutrophilic dermatoses constitute a heterogeneous group of inflammatory alterations of the skin, of unknown cause and related to disorders of the internal organs, histologically characterized by a predominantly neutrophilic infiltrate (10). This definition in turn includes subcorneal pustular dermatosis, Sweet's syndrome, gangrenous pyoderma, erythema elevatum diutinum, neutrophilic panniculitis and NEH. In addition to being associated with internal disorders, these processes are often clinically similar – a fact that may complicate the diagnosis.

In addition to other neutrophilic dermatoses, the clinical differential diagnosis of NEH must be established with other disorders such as skin infections in immunocompromised patients (cases have been reported involving typical NEH histology with the isolation of bacteria from cultures of the lesions) (11), polymorphous erythema, vasculitis or skin lesions produced by leukaemic infiltration. The histological differential diagnosis in turn comprises disorders affecting the eccrine sweat glands, barbiturate-induced coma blisters, squamous syringometaplasia and recurrent palmoplantar eccrine hidradenitis.

BD is a multisystemic disease characterized by recurrent oral aphthae, genital ulcerations, uveitis and skin lesions (12). The latter include neutrophilic dermatoses such as Sweet's syndrome or pyoderma gangrenosum (13). In addition, the presence of PMN has been demonstrated in active BD lesions (13) – including those attributable to pathergy phenomena. These considerations led Bilic & Mutasin (6) to suggest that NEH could be included within the range of cutaneous lesions of BD.

Neutrophilic dermatoses are not the only common manifestations found in patients with BD and CML. In effect, two patients with CML treated with interferon-α2 developed skin lesions of BD that disappeared after the medication was withdrawn (14). Moreover, the existence of a positive pathergy test has been shown in patients with CML subjected to treatment with interferon-α2 (15) – possibly due to an alteration in PMN activity in these subjects. In CML, this abnormal activity is attributable to the malignant cell clone, in vitro studies having shown that interferon-α2 regulates the activity of this clone in a dose-dependent manner, causing it to activate in a way similar to the PMN of patients with BD (16). In BD, abnormal PMN activity may be due to an increase in plasma cytokines (17) or reflect the existence of a constitutive anomaly of the PMN (15). These activated PMN may possibly play a pathogenic role in the NEH lesions of such patients.

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