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Atypical Clinical Appearance of Pemphigus Vulgaris on the Face: Case Report

Branka Marinović, Zrinka Bukvić Mokos, Aleksandra Basta-Juzbašić, Ines Lakoš Jukić, Davorin Lončarić, Takashi Hashimoto[1], Aida Pašić

University Department of Dermatology and Venereology, Zagreb University Hospital Center, Zagreb, Croatia; [1]Department of Dermatology, Kurume University School of Medicine, Fukuoka, Japan

Corresponding author:
Branka Marinović, MD, PhD
University Department of Dermatology and Venereology
Zagreb University Hospital Center
Šalata 4
HR-10000 Zagreb
Croatia
branka@marli.hr

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SUMMARY Pemphigus vulgaris is an organ-specific autoimmune mucocutaneous disorder. In the majority of cases, the disease manifests initially with oral lesions, and may be limited to a single site for months before spreading. A 78-year-old woman with yellowish crusted areas on her left preauricular region and close to the medial angle of her right eye is presented. Although she described an episode of erosions on her lower lip, the involvement of mucosal surfaces was not noticed on examination. Before she presented to our Department, she was misdiagnosed as an actinic cheilitis and malignant skin tumor. Histopathologic examination and direct immunofluorescence confirmed the diagnosis of pemphigus vulgaris. Immunoblotting of epidermal extracts detected IgG antibodies against desmoglein 3 but not desmoglein 1, which was also confirmed by ELISA test. The patient responded favorably to systemic corticosteroid therapy combined with adjuvant immunosuppressive therapy, with complete clearance of the lesions.

KEY WORDS pemphigus vulgaris; face; desmogleins; diagnosis

INTRODUCTION

Pemphigus vulgaris is a severe chronic autoimmune blistering disease characterized by blisters and erosions on the skin and/or mucous membranes (1,2). A diagnosis of pemphigus vulgaris is established by fulfilment of the following criteria: clinical findings, histologic evidence of acantholysis, deposits of IgG and/or some components of complement on the epithelium cell surfaces on direct immunofluorescence, and evidence of circulating IgG anti-cell surface autoantibodies on indirect immunofluorescence (3). Recently, differentiation between pemphigus vulgaris and pemphigus foliaceus is possible with ELISA test for desmoglein (Dsg) 1 and Dsg3. Among pemphigus vulgaris patients, those with dominant mucosal involvement usually have autoantibodies against Dsg3, and those with mucocutaneous involvement have autoantibodies against Dsg1 and Dsg3 (4,5).

Systemic glucocorticoids are still drugs of choice in the treatment of pemphigus vulgaris. Therapy is usually started with 1.0 mg/kg daily of oral prednisolone, which is followed by tapering the dose after initial control. In order to avoid long-term side effects, corticosteroid-sparing agents are usually employed (azathioprine, cyclophosphamide, methotrexate, mycophenolate mofetil, chlorambucil, and high-dose intravenous immunoglobulin G) (6).

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CASE REPORT

A 78-year-old woman presented to our Department in December 2002, for erosions covered with thick yellowish crusts in her left preauricular region and in the medial angle of her right eye. One year before, she was addmitted to ENT Department at another hospital for erosions on her lower lip, which were diagnosed as chronic actinic cheilitis. These lesions regressed spontaneously. Six months later, she noticed blisters close to the medial angle of her right eye and in the left preauricular region, leaving eroded and crusted areas. Similar lesions occurred on her trunk and scalp at the same time. On ophthalmologic examination, the lesion near her eye was diagnosed as a malignant tumor of the skin, and excision was suggested.

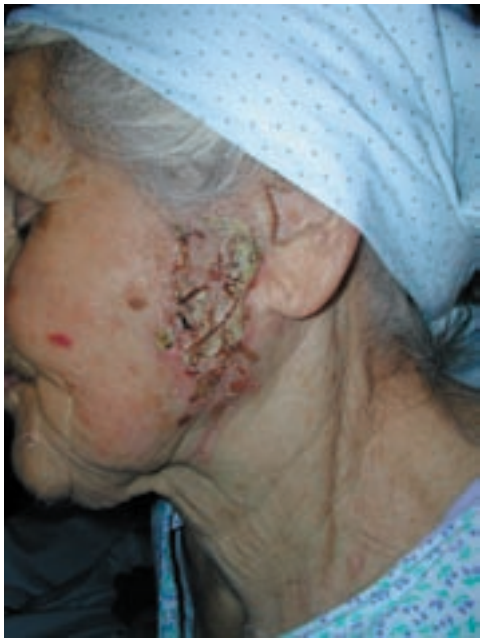

Figure 1. Yellowish crusted area on the left preauricular region.

When she was referred to our Department, yellowish crusted areas on her left preauricular region (Fig. 1) and close to the medial angle of her right eye (Fig. 2) were present. Erythematous, slightly infiltrated areas without blisters were observed on her scalp and presternal region. The involvement of mucosal surfaces was not noticed.

Based on the history of the disease and clinical features, pemphigus foliaceus, pemphigus vulgaris, bullous pemphigoid and Brunsting Perry pemphigoid were considered on differential diagnosis.

A battery of tests were preformed. Histopathology revealed erosions with pronounced

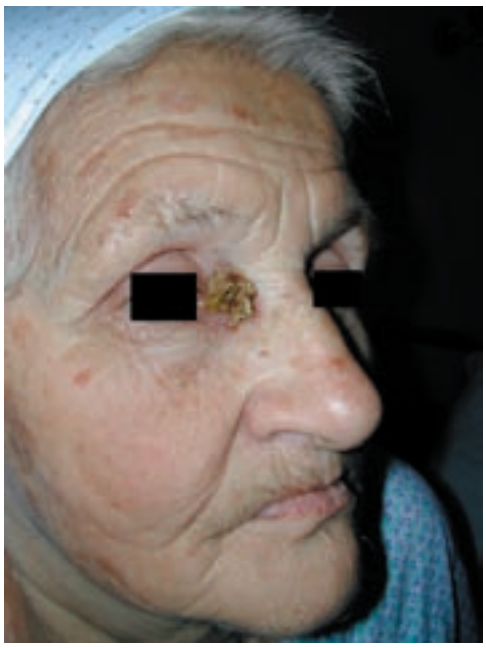

Figure 2. Crusted area in the medial angle of the right eye.

suprabasal acantholysis and numerous acantholytic keratinocytes. Loss of cell to cell attachment was noticed in the basal cell layer (Fig. 3).

On direct immunofluorescence of perilesional skin cell surface deposits of IgG and C3 were found. Indirect immunoflourescence was negative.

Immunoblotting of epidermal extracts detected IgG antibodies against Dsg 3 but not Dsg 1. This finding was also confirmed by Dsg1-/Dsg3+ ELISA.

After confirming the diagnosis, therapy with prednisolone in a dose of 60 mg/day was started. The dose was gradually tapered to 10 mg as a maintenance therapy. After 2 weeks azathioprine

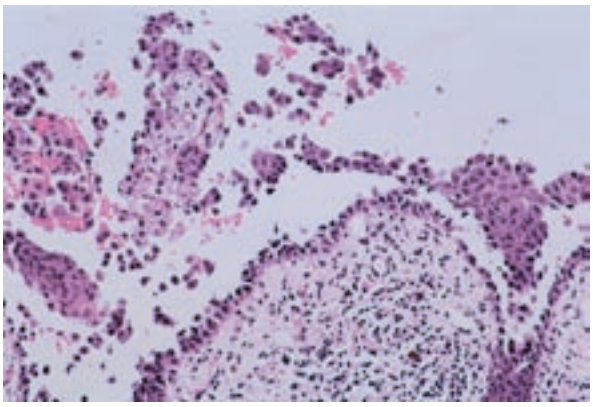

Figure 3. Erosion with pronounced suprabasal acantholysis and numerous acantholytic keratinocytes. Note the loss of cell to cell attachment in the basal cell layer. (HE, X50)

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in a dose of 100 mg/day was introduced. This dose was tapered to 50 mg/day after two weeks.

Our patient responded favorably to the therapy prescribed, with complete clearance of the lesions (Figs. 4 and 5).

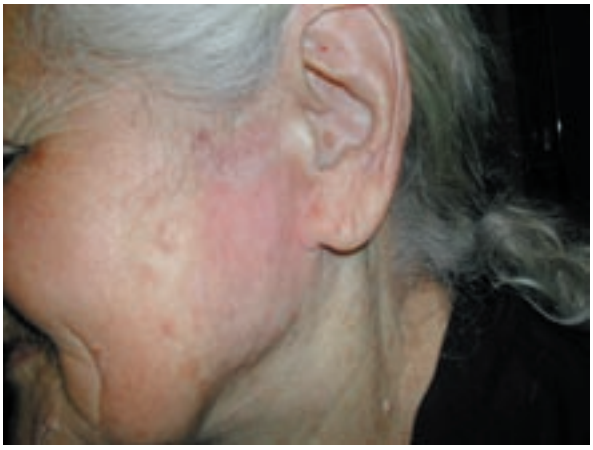

Figure 4. Left preauricular region after 6 weeks of therapy.

DISCUSSION

Pemphigus vulgaris is an organ-specific autoimmune mucocutaneous disorder (7). In the majority of cases, the disease starts in the oral cavity, although the initial lesions can occur anywhere on the skin and mucosal surfaces. The disease may remain limited to a single site for months before spreading (8). Although diagnosed as chronic actinic cheilitis, it is possible that erosions of the lips that appeared one year before admission to our Department were the first sign of pemphigus. It is not possible to confirm this because no biopsy for histology or immunofluorescence was performed. Yet, it appears quite intriguing that she has never developed erosions on the mucosal surfaces or on her lips later. The predominant and almost isolated changes on her skin were persistent crusted lesions on her face (left preauricular region and the medial angle of her right eye). Considering the age of our patient as well as solar degeneration of her skin, before admission these skin lesions were misdiagnosed as a malignant skin tumor, although there was no histopathologic evidence for it. However, detailed history of the disease and discrete changes on her scalp and trunk raised suspicion of one of the autoimmune blistering disorders. Histopathologic examination and direct immunofluorescence were in accordance with the diagnosis of pemphigus vulgaris (9). In addition to the atypical clinical finding, our interest was aroused by the results of immunoblotting and ELISA, both of which detected autoantibodies against Dsg3. In recent

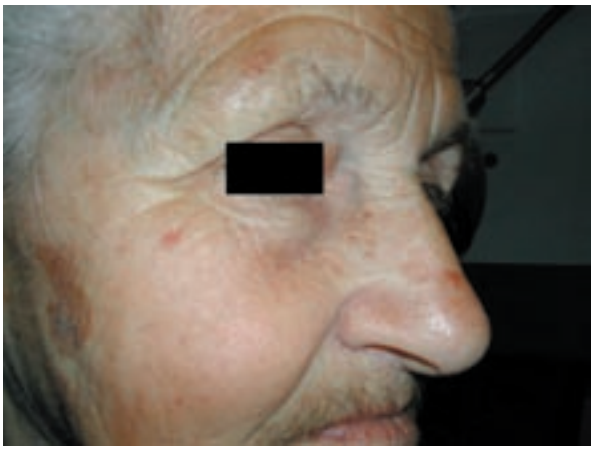

Figure 5. Medial angle of the right eye after 6 weeks of therapy.

studies it has been suggested that patients with Dsg3+/Dsg1- profile have mostly mucosal involvement, while those with Dsg3+/Dsg1+ profile have the mucocutaneous type of pemphigus vulgaris (10). Our patient had no diagnosed mucosal involvement, which was unexpected with the finding of solely Dsg3 antibodies. However, some authors have reported that there is a small percentage of patients with positive Dsg3 without mucosal involvement, suggesting that profiles of autoantibodies against Dsgs is not the sole determinant of lesion location in pemphigus vulgaris (11)

This case is one more confirmation for the importance of putting together clinical aspects with laboratory data obtained in diagnosing blistering diseases and before introducing therapy.

References

1. Braun-Falco O, Plewig G, Wolff HH, Burgdorf WHC. Blistering diseases. In: Braun-Falco O, Plewig G, Wolff HH, Burgdorf WHC, eds. Dermatology. 2nd, Completely Revised Edition. Berlin: Springer; 2000:649-95.
2. Hertl M. Pemphigus. In: Hertl M, ed. Autoimmune diseases of the skin. Pathogenesis, diagnosis, management. Vienna: Springer-Verlag; 2001:39-63.
3. Nousari HC, Anhalt GJ. Pemphigus and bullous pemphigoid. Lancet 1999;354:667-72.
4. Hashimoto T. Recent advances in the study of the pathophysiology of pemphigus. Arch Dermatol Res 2003;295:2-11.
5. Amagai M, Komai A, Hashimoto T, Shirakata Y, Hashimoto K, Yamada T, *et al.* Usefulness

of enzyme-linked immunosorbent assay using recombinant desmogleins 1 and 3 for serodiagnosis of pemphigus. Br J Dermatol 1999;140:351-7.

6. Harman KE, Albert S, Black MM; British Association of Dermatologists. Guidelines for the management of pemphigus vulgaris. Br J Dermatol 2003;149:926-37.
7. Mimouni D, Nousari CH, Cummins DL, Kouba DJ, David M, Anhalt GJ. Differences and similarities among expert opinions on the diagnosis and treatment of pemphigus vulgaris. J Am Acad Dermatol 2003;49:1059-62.
8. Baykal C, Azizlerli G, Thoma-Uszynski S, Hertl M. Pemphigus vulgaris localized to the nose and cheeks. J Am Acad Dermatol 2002;47:875-80.
9. Megahed M. Histopathology of blistering diseases. With clinical, electron microscopic, immunological and molecular biological correlations. Berlin: Springer Verlag, 2004.
10. Anhalt GJ, Diaz LA. Pemphigus vulgaris – a model for cutaneous autoimmunity. J Am Acad Dermatol 2004;51:S20-S21.
11. Jamora MJ, Jiao D, Bystryn JC. Antibodies to desmoglein 1 and 3, and the clinical phenotype of pemphigus vulgaris. J Am Acad Dermatol 2003;48:976-7.

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