Case study

Clinical and evolutionary characteristics of pemphigus by gender: comparative study of 330 cases

Abstract:

Introduction: Pemphigus is the most common chronic autoimmune bullous dermatosis in the Maghreb and is the leading cause of hospitalization in our department, with 15 new cases diagnosed yearly [6]. Very few studies have investigated the significant influence of gender on the clinical phenotype, the activity score and the evolution of the disease. The aim of our study is to investigate the clinical and evolutionary characteristics of pemphigus based on gender differences.

Materials & Methods: We performed a comparative descriptive study of 142 men and 188 women with pemphigus in the Department of Dermatology at Ibn Sina University Hospital in Rabat between 1990 and 2022. The records were analyzed retrospectively, the following data were extracted from the medical records: age at diagnosis, mean duration of disease, history, presence of autoimmune diseases, clinical subtypes, cutaneous and mucosal involvement, and course. Excel and Statistical Package for the Social Sciences (SPSS Inc, version 15.0 for Windows) were used for data entry and analysis.

Results: There was no significant difference age, and the mean duration of the disease before diagnosis in both cases was (13 months). The association with autoimmune diseases was more frequent in women (25 patients) VS 2 men. As for the clinical phenotypes, we noticed that pemphigus herpetiformis was more frequent in women but also pemphigus vegetans and pemphigus vulgaris. Isolated mucosal involvement was more frequent in women, PDAI was more severe in women (145 cases) VS men (96 cases). In both sexes, the therapeutic protocol used was oral corticosteroids in 55%, a combination of corticosteroids + cortisone-sparing agents in 45%, the most commonly used immunosuppressant was azathioprine in 91.6%, 8% of patients used rituximab as first-line therapy. In terms of evolution: a complete remission was observed: 48% of women (83 cases) VS 40% of men (52 cases); there was no significant difference in terms of : Bleaching time , Relapses and mortalityWomen tend to relapse 49 months after complete remission, while men after 52 months.

Conclusion: We conclude that gender may influence the clinical phenotype of pemphigus patients: pemphigus herpetiformis, pemphigus vegetans, mucosal involvement, severe PDAI and association with autoimmune diseases are more frequent in women. Our data show that there are no significant differences in terms of evolution or prognosis.

KEYWORDS: Pemphigus, gender , bullies dermatosis, autoimmune diseases

INTRODUCTION:

Pemphigus refers to a family of rare acantholytic autoimmune dermatoses of the mucocutaneous membranes in which acantholysis, or the loss of cell-to-cell adhesion, causes potentially lethal bullae and erosion formation. Multiple subtypes of pemphigus disease have been identified based on their distinct clinical features and pathophysiology, including pemphigus vulgaris (PV), pemphigus foliaceus (PF), IgA pemphigus, and paraneoplastic pemphigus (PNP)[1].

Central to the pathogenesis of pemphigus is the presence of immunoglobulin (Ig) antibodies against proteins on the cell surface of keratinocytes (desmogleins,transmembrane glycoproteins associated with desmosomes that confer cell-cell adhesion within the epidermis)[2-3-4]

Pemphigus occurs worldwide (incidence varies from0.5 to 34 cases/million inhabitants/year) and affects all racial and ethnic groups[2-5].

Pemphigus is the most common chronic autoimmune bullous dermatosis in the Maghreb and is the leading cause of hospitalization in our department, with 15 new cases diagnosed yearly [6]. Very few studies have investigated the significant influence of gender on the clinical phenotype, the activity score and the evolution of the disease. The aim of our study is to investigate the clinical and evolutionary characteristics of pemphigus based on gender differences.

MATERIALS AND METHODS

We performed a comparative descriptive study of 142 men and 188 women with pemphigus in the Department of Dermatology at Ibn Sina University Hospital in Rabat between 1990 and 2022. The records were analyzed retrospectively, the following data were extracted from the medical records: age at diagnosis, mean duration of disease, history, presence of autoimmune diseases, clinical subtypes, cutaneous and mucosal involvement, and course. Excel and Statistical Package for the Social Sciences (SPSS Inc, version 15.0 for Windows) were used for data entry and analysis.

RESULTS

There was no significant difference age (52.24±14 in women VS 54.05±15 in men), and the mean duration of the disease before diagnosis in both cases was (13 months). The association with autoimmune diseases was more frequent in women (9 patients with dysthyroidism, 5 cases with type 1 diabetes, 5 rheumatoid arthritis, 2 systemic lupus, 1 autoimmune hepatitis, 1 Gougerot-Sjogren's, 1 vitiligo, 1 autoimmune sclerosing cholangitis) VS 2 men with type 1 diabetes and 1 vitiligo. As for the clinical phenotypes, we noticed that pemphigus herpetiformis was more frequent in women (11 cases VS 2 men), but also pemphigus vegetans (20 women VS 13 men) and pemphigus vulgaris (78 women VS 56 men), the superficial forms were distributed as follows (53 seborrheic P in women VS 50 in men, 25 foliaceous P in women VS 20 in men) and 1 case of paraneoplastic pemphigus each. Isolated mucosal involvement (without skin involvement) was more frequent in women (15 cases) VS 3 men, PDAI was more severe in women (145 cases) VS men (96 cases).

In both sexes, the therapeutic protocol used was oral corticosteroids in 55%, a combination of corticosteroids + cortisone-sparing agents in 45%, the most commonly used immunosuppressant was azathioprine in 91.6%, 8% of patients used rituximab as first-line therapy. In terms of evolution: a complete remission was observed: 48% of women (83 cases) VS 40% of men (52 cases); there was no significant difference in terms of : Bleaching time (80 days for women VS 73 days for men). Relapses and mortality: in women (52 cases or 30% for relapses and 16 cases of death) VS men (28% for relapses or 37 cases and 17 cases of death). Women tend to relapse 49 months after complete remission, while men after 52 months.

DISCUSSION

Pemphigus is an acquired bullous dermatosis predominantly in female patients, like most autoimmune diseases (lupus, scleroderma, dermatomyositis...)[6]. The onset of autoimmune diseases is associated with the levels of sex hormones. On the other hand, females go through several periods of hormonal change including puberty, menstruation period, pregnancy, and menopause. Thus, the prevalence of pemphigus vulgaris is higher among postmenopausal females [7].

However, a single study by Uzun and al. showed that pemphigus is male-predominant in countries such as Spain and Saudi Arabia [8-9]. On the other hand, the ,Turkish study of Ibrahim and Al concluded that men and women show a close rate, which means that autoimmunity is not the only factor in the etiology of this disease [10] . Pemphigus has been associated with various HLA antigens

in different populations. This association mainly concerns class II antigens [11]. Genetic factors may therefore play an important role in this disease.

Few studies have analyzed the epidemiological and therapeutic differences between the two sexes. The survey by Naseer et al. found that men with PV are more likely to develop the disease before age 40, and had more severe skin involvement and showed greater co-expression of anti-Dsg1 and anti-Dsg3 antibodies, in contrast, women tended to have a predominance of mucosal involvement and a personal and family history of autoimmunity [12].Yavuz et al. found that pemphigus vegetans and pemphigus vulgaris were more common in women, while superficial pemphigus (seborrheic and foliaceous) was more common in men. [13].

Lagacé et al reported an overall female predominance (F:M 1-5:1) for pemphigus vulgaris (PV), with conflicting results or equal gender distribution for pemphigus foliaceum (PF) and pemphigus herpetiformis, and with a possibly higher risk of paraneoplastic pemphigus in men [14-15].

In our study, we found a female predominance in all phenotype of pemphigus

On the other hand, there were no significant differences in terms of evolution or prognosis according to gender.

CONCLUSION

We conclude that gender may influence the clinical phenotype of pemphigus patients: pemphigus herpetiformis, pemphigus vegetans, mucosal involvement, severe PDAI and association with autoimmune diseases are more frequent in women. Our data show that there are no significant differences in terms of evolution or prognosis.

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