Bali Medical Journal (BMJ) 2013, Volume 2, Number 1: 42-45
P-ISSN.2089-1180, E-ISSN.2302-2914

PREVALENCE AND QUALITY OF LIFE OF PEMPHIGUS PATIENTS AT SANGLAH GENERAL HOSPITAL BALI-INDONESIA

Wardhana, M., and Rusyati, L. M.

Department of Dermato-Venereology Sanglah General Hospital/Faculty of Medicine
Udayana University, Bali-Indonesia.

Objectives: Pemphigus vulgaris (PV) is an autoimmune-blistering disease of the skin and mucous membranes caused by auto-antibodies against desmoglein-3 (Dsg-3) on the keratinocyte cell surface of squamous stratified epithelia. Pemphigus is a life-threatening autoimmune bullous disease resulting in the widespread denudation of skin and mucous membrane and severe impact of quality of life. The purpose of this study was to evaluate retrospectively the prevalence of pemphigus and to elucidate the clinical variants, clinical course, prognosis and quality of life (QOL) of pemphigus patients after discharge from hospitalized. **Method:** Observational non analytical retrospective study was conducted by observation of the medical records of all the newly registered patients with pemphigus at Sanglah General Hospital in Bali-Indonesia during the period of January 1995 and December 2002, and analyzed with regard to personal statistic, history of the diseases including onset, site of affected, symptoms, clinical diagnosis, severity, associated illness, therapy, and quality of life based on the Finlay's methods. **Results**: During the 8-year periods studies, 33 pemphigus patients were admitted, represented 5.8 % of all patients admitted in our in-patient ward during the periods. Our patients consist of female 20 patients (60.6 %) and male 13 patients (39.4 %). The most common of clinical type was pemphigus vulgaris 26 patients (78.78 %), followed by pemphigus foleaceous and pemphigus vegetans. Six patients (18.18 %) of 16 severe patients with severe condition at the clinical course of the diseases was death during the course of hospitalized. A number of 2 patients, in this study were observed with severe impact of quality of life. **Conclusion:** Our finding showed that pemphigus vulgaris is common type of our cases has a relatively high prevalence our hospital (5.8 %), and relatively high death rate (18.18 %). In our study, systemic corticosteroid was still applied until present for life saving drug for Pemphigus.

Keywords: Pemphigus, retrospective study, quality of life

INTRODUCTION

Pemphigus is an autoimmune intra epidermal vesicobullous disease, clinically manifests as flaccid blisters with tendency for peripheral extension. Pemphigus is a life-threatening autoimmune bullous disease, mediated by autoantibodies against antigens on the keratinocyte cell surface of squamous stratified epithelia, resulting in the widespread denudation of skin and mocous membrane. The disease more commonly affects women than man.[1,2]

There are three distinct varieties of pemphigus which can be distinguished based on clinical and light microscopic criteria. Pemphigus vulgaris(PV), the most common type of pemphigus, predominates in middle-age and elderly, characterized by formation of flaccid blisters. Oral involvement is almost always present and may become evident before development of lesions on skin and lesions

Correspondence: Wardhana, M.
Address: Department of Dermato-Venereology Sanglah General Hospital/Faculty of Medicine Udayana University, Bali-Indonesia.
Email: wardhanamade118@gmail.com

may also occur on the trunk and extrimities. Pemphigus foliaseous (PF), superficial pemphigus. The most characteristics of pemphigus are scaling and crusted plaques on the trunk. In contrast to PV, oral lesions are almost never seen in PF. Paraneoplastic pemphigus (PNP) characterized by extensive recalcitrant oral erosions and polymorphic skin lesions.[2,3]

Although the exact phatogenesis of pemphigus is not yet completely understood, with immunofluorececse technique, autoantibodies were found in the sera of pemphigus patients. Circulating pemphigus autoantibodies correlate directly with the disease progress. Pemphigus occurs in neonates born from mothers with pemphigus as a result of transplacental transfer of autoantibodies. Immunochemical and molecular cloning studies with pemphigus autoantibodies have identified desmogleins-3 (Dsg-3) as target antigen in pemphigus. Desmogleins are transmembrane glycoprotein components of the core regions of desmosome, cell adhesion junctions typical of stratified squamous epithelia.

The recent discovery of an association with several HLA haplotypes has provided evidence of a

genetic component which plays an important role in the etiology of the disease. High incidence of pemphigus in some ethnic groups, namely Ashkenazi Jewish and Japanese, has been shown to be strongly related to several HLA-class II genes. Besides genetic background, a growing list of environmental factors, such as drugs, chemical, foods, physical agents, and stress, have been recognized as triggering factors of pemphigus.[1,2]
In the past, untreated pemphigus had a very high mortality rate.[3,5] Therapy aimed at immuno suppression has reduced the mortality to 5 to 15%. Specifically, therapy with steroids has been the most significant factor in reducing the mortality of this disease, often in conjunction with other immunosuppressants such as cyclophosphamide, azathioprine, and mycophenolate as well as plasmapheresis.

There are no accurate data of pemphigus in our Departement, so we conducted this non-analytic observational study. The objectives were to evaluate retrospectively the prevalence of pemphigus and to elucidate its clinical variants, clinical course, prognosis and quality of life at Sanglah General Hospital, Bali-Indonesia during 8 years periods (1995-2002).

MATERIALS AND METHOD

The study was carried out at in-patients department, Sanglah General Hospital, Bali-Indonesia. This is a referral hospital as tertiary health care center. All pemphigus patients admitted as in-patients admitted to our hospital from January 1995 to December 2002 comprised the subjects of this study. Institutional review board approval for ethical clearance was obtained from local medical committee ethic at Sanglah General Hospital /Faculty of Medicine Udayana University. Inform concern were signed for all patients. Diagnose was confirmed, in each patients by clinical sign, Tzank smear and biopsy for histophatologic examination. Categorization of the patients in various subtypes was based on the clinical feature, and histologic feature. Various clinical parameters were studies, including age, sex, age at onset, duration of the diseases, sites involved at onset, site of primary lesions and their evolution during course of diseases, severity of the diseases, precipitate /or aggravating factors, other diseases concomitances, previously therapy, and outcome treatment. The diseases duration is defined as the time from pemphigus lesion onset until enrolment in the study. Dermatology Life Quality Index was measured base on method of Finlay and Khan. Severity and affect of the diseases were evaluated by applying questionnaires in daily life.[9]

RESULTS

There were 33 patients with pemphigus, representing 7.3 % of 451 patients admitted to our In Patients Department between January, 1995 and December 2002. The annual incidence was 4 new patients per year. The ratio of men to women was 1: 2.3 (10 men, 23 women for all pemphigus cases). The patient ages ranged from 19 to 68 years (Table 1).

In table 2 shows the site of first onset and the sites affected in our pemphigus patients. In 6 patients of PV the disease began in the oral mucosa, and in 9 patients the onset involved both in the skin and oral mucosa. In the remaining (18) patients the first onset involved the skin only.

Tabel 1
Charateristic of the pemphigus patients

Charateristic	PV (26)	PF (5)	Pveg (2)
Sex			
Male	9	1	-
Female	17	4	2
Age			
<30	2	-	-
>30 - 40	5	1	
>40 - 50	11	3	1
>50	8	1	1
Onset			
< 6 month	6	1	1
6 – 12 years	13	3	1
> 12 years	7	1	-
Severity			
Mild	6	1	1
Moderate	15	3	1
Severe	5	1	-
Initial lesion			
Oral mucosa only	5	1	-
Oral mucosa+skin	8	1	-
Skin only	13	3	2

Table 2
Profile of Pemphigus Patient from other Studies

	Sehgal (1981) North India	Kyriakos (1998) Athens	Micali (1998) Sicilia	Qasem (1999) Qwait	Tsankov (2000) Sofia	Djuanda (1995) Jakarta	Wardhana (2002) Bali
Prevalence (hospital based)	70/6 years	14/2 years	84/14 years 1.3 %	54/16 years	74/16 years	24/5 years	33/8 years 1.3 %
Sex ratio (M/F)	33/37 1:1.12	17/20 1:1.6	32/52 1:1.6	20/34 1:1.7	35/39 1:1.11	12/12 1:1	9/17 1:1.8
Range age (mean)	7 - >51	23 – 91	20 – 87 (55)	12 – 74 (36.5)	30 – 86 (62.43)	14 – 78 (47.2)	19 – 68 (43.)
Lag time Onset & Diagnosis)	6 month		> 7 month				< 6month
Prevalence rate (community based)			0.25 per 100 000		0.51 per 100 000		0.46 per 100 000
Death rate	5/70 (7.1 %)	0 %		7/54 (12.9%)	7/74 (9.5%)	6/24 (25 %)	6/33 (18.20 %)

DISCUSSION

Pemphigus vulgaris(PV) accounted as the most common of all cases (26 cases or 78.78%), followed by pemphigus foleaseus(PF) (5 cases or15.1%) and pemphigus vegetants (PVeg) (2 cases or 6.0%).

The onset of first lesion of the disease revealed that most cases had the first onset 6 months earlier before admission (8 cases or 24.2 %), 17 cases or 51.51 % of cases had first onset 6 – 12 months earlier before admission and 8 cases or 24.2 % after 12 months. Six patients with pemphigus vulgaris were hospitalized with a severe condition and did not of them with PF and PVeg with severe condition.

Regarding concomitant diseases, 3 patients also suffered atopic dermatitis, dermatophytosis and seborrhoic dermatitis. During hospitalization we found other conditions possibly associated with prolonged systemic corticosteroid therapy, moon face was found in 5 patients, diabetes mellitus 3 cases, hypertension 3 patients, gastrointestinal disorder 1 patient.

Sixteen patients (48.48 %) underwent therapy prescribed by other physicians or general practitioners, prior visit to our clinic. Medicines given in decreasing order of frequency were antibiotics, antihistamines, vitamins, and corticosteroid.

All of our patients were treated with systemic corticosteroid/ prednisone alone at an initial dose of 90-120 mg/day for the severe cases, 40-90 mg/day for the moderate cases and 20-40 mg/day for the mild cases. One cases treated by combination corticosteroid and azatioprine.

Detailed follow-up could be completed only on 19 patients and the remaining patients were lost to follow-up. Four patients have had completed clinical remission without treatment, nine patients with a low-dose of steroid. Six severe patients, 4 women and 2 men, died during the course of treatment. The causes of death were septicaemia and pneumonia.

Eighteen out of 33 our patients from Denpasar with adult population 325 000, it mean annual incidence of pemphigus in Denpasar it is 0.46/100 000 per years. Our data indicate that pemphigus is more frequent diseases in Bali compared to other study. In Jakarta, it was reported that 24 pemphigus patients in 5 years (1989-1993).[8] In Finland, the annual incidence of pemphigus is extremely low, 0.076/100 000 inhabitants; in North America it is 0.29-0.42/100 000 adults; in Malaysia, 0.2/100 000; in Southern Arizona, 0.5/100 000; in Sofia, 0.47/100 000.[3-5]

The diagnosis of our patients and determination of clinical variants were based on clinical findings and Tzank smear or histopathologic examination. Direct/indirect immunoflouresence test were not carried out. The results of other laboratory examination showed no specific results for pemphigus. Pemphigus vulgaris the predominant clinical subtype were observed in 78.78 % in our patients, and more frequently affecting women, with a ratio of men to women of 1: 2.3, similar as reported by other authors. Similar observations have been found in Malaysia, Qwait, Sofia. Pemphigus more frequently affected women 14 (53.8 %), with a ratio of men to women of 1: 1.6, as reported by Sehgal et al (1981).[3]

In our data, first onset of the disease occur more prevalently at the age of fourth and fifth decade of life, namely 12 cases (46.1 %), as similarly reported by other authors. A younger age of onset was found in a 19-year old patient. The explanation for the early age of onset not clear.[4,8]

Among our cases, we found six patients with the initial lesion on the oral mucosa and extended to the skin. The most common initial lesion occurred on the skin only and usually extended to the oral mucosa.[6,7] While the etiology of pemphigus is still unknown, several factors have been implicated for its geographic, such as ethnic and genetic factors. In our cases family history of the diseases and no precipitation factors were noted. Until 2 years of discharge from hospitalized, there are 19 patients with complete of follow up. Nine patients of them did not have problem in their quality of life, 5 patients felt a little trouble in their quality of life and there were 2 patients with severe impact of daily life.

CONCLUSION

In this study, we observed that pemphigus vulgaris is common type of cases. This pemphigus has a relatively high prevalence in our hospital (5.8%), and relatively high death rate (18.18 %). In our study until present day, systemic corticosteroid was still applied for treating Pemphigus for life saving of the patients.

ACKNOWLEDGMENT

The authors would like to thanks the director of Sanglah General Hospital Bali-Indonesia for access to the hospital. Specials thanks was also dedicated the head of Dermato-Venereology Department for access and aid during research.

REFERENCES

1. Lenz, P., Amagai, M., Platzer, B, at al. 1999. Desmoglein 3-ELISA : A Pemphigus Vulgaris-Specific Diagnosis Tool. *Arch Dermatol*. 35:143-148.
2. Udey, M. C., and Stanley, J. R. 1999. Pemphigus-Diseases of Antidesmosomal Autoimmunity. *JAMA*. 6/282.
3. Sehgal, V. N., Bharija, S. C., Sharma, A. K., Bikhchandani, R., and Koranne, R. V. 1981. Geographical Pattern of Pemphigus in North India. *The J of Dermatol*. 8:343-345.
4. Kyriakis, K. P., and Tosca, A. D. 1998. Epidemiologic observations on the natural course of Pemphigus vulgaris. *Int J of Dermatol*. 37: 215-219.
5. Micali, G., Musumeci, M. L., Nasca, M. R. 1998. Epidemiologic analysis and clinical course of 84 consecutive cases of pemphigus in eastern Sicilia. *Int J of Dermatol*. 37: 197-200.
6. Alsaleh, Q. A., Nanda, A., Al-Baghli, N. M., and Dvorak, R. 1999. Pemphigus in Qwait. *Int J of Dermatol*. 38:351-356.
7. Tsankov, N., Vassileva, S., Kamarashev, J., Kazandjieva, J., and Kuzeva, V. 2000. Epidemiology of Pemphigus in Sofia, Bulgaria. A 16-year retrospective Study (1980-1995). *Int J of Dermatol*. 39:104-108.
8. Djuanda, A. 1995. Penilaian Pengobatan Pemfigus dengan Kortikosteroid Sistemik Sebagai Obat Utama selama 5 Tahun (1989-1993*). MDVI*. 22/4: 144-148.
9. Paradisi, A., Sampogna, F., Di Pietro, C., Cianchini, G., Didona, B., Ferri, R., Abeni, D., and Tabolli, S. 2008. Quality-of-life assessment in patients with pemphigus using a minimum set of evaluation tools. J Am Acad Dermatol. 60(2):261-9.