

# Clinical Profile of Psoriasis Vulgaris at Soetomo General Hospital, Surabaya

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**Submission date:** 03-Apr-2023 10:33PM (UTC+0800)

**Submission ID:** 2054650074

**File name:** of\_Psoriasis\_Vulgaris\_at\_Soetomo\_General\_Hospital,\_Surabaya.pdf (141.75K)

**Word count:** 5409

**Character count:** 29112

DOI: <http://dx.doi.org/10.33846/hn40902>  
<http://heanoti.com/index.php/hn>



## RESEARCH ARTICLE

URL of this article: <http://heanoti.com/index.php/hn/article/view/hn40902>

**Clinical Profile of Psoriasis Vulgaris at Soetomo General Hospital, Surabaya**

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## ABSTRACT

Psoriasis vulgaris is a progressive chronic inflammatory skin disease. The prevalence of psoriasis vulgaris in the world, and in Indonesia itself. Psoriasis vulgaris brings a negative effect on patient's physical, emotional and psychosocial aspect. This study aimed to evaluate the clinical profile of psoriasis vulgaris in the Soetomo General Hospital Surabaya, in the period of 2016-2018. This was a retrospective descriptive study using the medical record data. The results showed that 201 patients with psoriasis vulgaris. The majority of psoriasis vulgaris cases were males (51.24%), aged 46-55 years old patients (26.87%), occupations as private employees (45.27%), triggering factor was hypertension (26.86%), common complaint was red patches (66.17%), common clinical presentation was erythematous macules (90.54%), the occurrence of chronic residif was (61.69%), typically found in the whole body (57.21%), degree of severity was 'severe' (21.89%), duration of disease was 3 months (45.27%), the percentage of sharing a similar disease with family was (0.99%), diagnosed by Histopathology examination was (38.31%), the most common employed systemic therapy and topical was cetirizine (25.87%) and desoxymethasone cream (27.36%). Psoriasis vulgaris diagnosis is done by carrying out an anamnesis and clinical symptoms, and the results were then compared to the results of histopathological examination.

**Keywords:** psoriasis vulgaris; retrospective; profile; Surabaya

## INTRODUCTION

Psoriasis is a non-contagious progressive chronic inflammatory skin disease. Although the cause is not completely known, genetic and environmental factors play an important role in the pathogenesis of psoriasis since this disease attacks autoimmunity<sup>(1)</sup>. Psoriasis is divided into psoriasis vulgaris and psoriasis pustulosa<sup>(1)</sup>. Psoriasis vulgaris is the most common form of the disease and accounts for about 90% of cases. The typical lesion is a monomorphic, well-demarcated, erythematous plaque. The plaque can extend over a larger area, and can also appear as erythroderma affecting the entire body surface (skin). The areas of predilection for lesions are the elbows and knees, which are the extensors of the extremities, lumbosacral, buttocks, and genitals. The production of scales appear constantly covering erythematous plaques<sup>(2,3)</sup>.

Psoriasis vulgaris can affect all ages, including childhood. In a study in German, the initial peak of psoriasis was common at ages 16 to 22 and the next at ages 57 to 60. Psoriasis vulgaris itself tends to last a lifetime, fluctuating in degree and severity. About one third of patients with psoriasis vulgaris had similar family medical history<sup>(4)</sup>. Psoriasis vulgaris in childhood is found to be higher in European countries. In the case of pediatric psoriasis vulgaris, there was 48.8% of kids whose family history had psoriasis vulgaris<sup>(5)</sup>.

Based on WHO estimates, the number of psoriasis patients in every country in the world reaches 1-3% of the total population. In Europe, the prevalence of psoriasis vulgaris reaches 1.5-3%, while in Asia it was 0.4-0.7%<sup>(6)</sup>.

Based on 53 studies reported that the prevalence and occurrence of psoriasis was in the general population. The prevalence in kids ranged from 0% (Taiwan) to 2.1% (Italy), and in adults varied from 0.91% (US) to 8.5% (Norway)<sup>(7)</sup>.

Cases of psoriasis vulgaris according to data in Kandou Central Hospital in Manado in the period of January 2013 to December 2015, there were 188 new cases of psoriasis of 3573 new visits for skin diseases (5.26%)<sup>(8)</sup>.

According to data obtained in 2018 at the Inpatient Installation for Dermatology and Venerology of Soetomo General Hospital Surabaya, there were 36 patients with psoriasis vulgaris from January 2016 to December 2017<sup>(9)</sup>.

Since prevalence of psoriasis vulgaris varied from one country to another. Indonesia encourages research to evaluate psoriasis vulgaris patients' clinical profile in the Soetomo General Hospital Surabaya in the period of 2016-2018. This retrospective study was designed to evaluate the prevalence of general features, clinical features, triggering factors, diagnosis, and psoriasis vulgaris management.

The purpose of this research is to know the cliniprofile of psoriasis vulgaris in Soetomo General Hospital, Surabaya period 2016-2018.

#### METHODS

This study employed a descriptive method by collecting data on psoriasis vulgaris patients in the Dermatology and Venerology Outpatient Department of Dr. Soetomo General Hospital Surabaya for the period of 2016-2018 retrospectively through the medical patients' records with the consequent technique. The technique samples used in this study is a non-probability sampling and the type is total sampling, all psoriasis vulgaris patients, in the Dermatology and Venerology Outpatient Department of Soetomo General Hospital Surabaya in the period of 2016-2018, who met the criteria of an accessible population based on inclusion and exclusion criteria. The variables studied in this study were age, sex, occupation, triggering factors, main complaints, chronic recidivist, family medical history, lesion location, clinical feature, duration of disease. Histopathology examination, psoriasis vulgaris management. This study has received a certificate of ethical clearance from the Health Research Ethics Committee of dr. Soetomo General Hospital Surabaya No. 1424/KKEPK/VIII/2019.

#### RESULTS

##### Psoriasis Vulgaris Patients's Age

Most psoriasis vulgaris patients were in the age range of 46-55. followed by patients with an age of 36-45 years.

Table 1. Distribution of psoriasis vulgaris patients' age in Soetomo General Hospital (2016-2018)

| Age   | Frequency | Percentage |
|-------|-----------|------------|
| 0-5   | 6         | 2.99       |
| 5-11  | 2         | 1          |
| 12-16 | 4         | 1.99       |
| 17-25 | 28        | 13.93      |
| 26-35 | 35        | 17.41      |
| 36-45 | 36        | 17.91      |
| 46-55 | 54        | 26.87      |
| 56-65 | 21        | 10.45      |
| >65   | 15        | 7.46       |
| Total | 201       | 100.00     |

##### Psoriasis Vulgaris Patients's Sex

Most psoriasis vulgaris patients were male patients than female patients.

Table 2. Distribution of psoriasis vulgaris patients' sex in Soetomo General Hospital (2016-2018)

| Sex    | Frequency | Percentage |
|--------|-----------|------------|
| Male   | 103       | 51.24      |
| Female | 98        | 48.76      |
| Total  | 201       | 100.00     |

##### Psoriasis Vulgaris Patients's Job

The largest number of patients' occupations were private employees. that is as many as 91 patients.

Table 3. Distribution of psoriasis vulgaris patients' job in Soetomo General Hospital (2016-2018)

| Job   | Frequency | Percentage |
|---|-----------|------------|
| Student/College Student   | 12        | 5.97       |
| Government employees  | 31        | 15.42      |
| Private employees   | 91        | 45.27      |
| Housewife   | 35        | 17.41      |
| Entrepreneur  | 9         | 4.47       |
| Retired   | 5         | 2.48       |
| Indonesian National Armed Forces (TNI) and Indonesian National Police (POLRI) | 2         | 0.99       |
| Farmer  | 2         | 0.99       |
| Teacher   | 1         | 0.49       |
| Others  | 11        | 5.47       |
| Unemployment  | 2         | 0.99       |
| No Data   | 0         | 0          |
| Total   | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Triggering Factor

The most psoriasis triggering factor in psoriasis vulgaris patients was hypertension.

Table 4. Distribution of psoriasis vulgaris patients' triggering factor in Soetomo General Hospital (2016-2018)

| Triggering Factors | Frequency | Percentage |
|--------------------|-----------|------------|
| Hypertension       | 54        | 26.86      |
| UV rays            | 26        | 12.93      |
| Diabetes           | 19        | 9.45       |
| Drugs              | 12        | 5.97       |
| Stress             | 11        | 5.47       |
| Genetic            | 2         | 0.99       |
| Trauma             | 2         | 0.99       |
| Infection          | 2         | 0.99       |
| Hormone            | 2         | 0.99       |
| Smoke              | 2         | 0.99       |
| Alcohol            | 0         | 0          |
| Total              | 146       | 49.25%     |

### Psoriasis Vulgaris Patients's Main Complaint

The main complaint felt by patients was red patches on the skin. Table 5 shows that there are patients who have more than 1 main complaint.

Table 5. Distribution of psoriasis vulgaris patients' main complaint in Soetomo General Hospital (2016-2018)

| Main complaint    | Frequency | Percentage |
|-------------------|-----------|------------|
| Red spots         | 133       | 66.17      |
| Itchy             | 111       | 55.22      |
| Scaly skin        | 71        | 35.32      |
| Burning sensation | 20        | 9.95       |
| No Data           | 48        | 23.88      |

### Psoriasis Vulgaris Patients's Chronic Recidivists

Table 6 shows that chronic recidivist was experienced by as many as 124 patients.

Table 6. Distribution of psoriasis vulgaris patients' chronic recidivists in Soetomo General Hospital (2016-2018)

| Category            | Frequency | Percentage |
|---------------------|-----------|------------|
| Chronic recidivists | 124       | 61.69      |
| Don't experience    | 1         | 0.50       |
| No Data             | 76        | 37.81      |
| Total               | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Family Medical History

Table 7 shows that there are 2 (0.99%) patients with similar family medical history.

Table 7. Distribution of psoriasis vulgaris patients' family medical history in Soetomo General Hospital (2016-2018)

| Family medical history | Frequency | Percentage |
|------------------------|-----------|------------|
| Exist                  | 2         | 0.99       |
| Denied                 | 4         | 1.99       |
| No Data                | 195       | 97.02      |
| Total                  | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Lesions Location

The most psoriasis vulgaris patients' lesions location in the whole body.

Table 8. Distribution of psoriasis vulgaris patients' lesions location in Soetomo General Hospital (2016-2018)

| Lesions Location  | Frequency | Percentage |
|-------------------|-----------|------------|
| All over the body | 115       | 7.21       |
| Hands and Legs    | 20        | 9.95       |
| Body and head     | 11        | 5.47       |
| Hands             | 10        | 4.98       |
| Body. hands. legs | 8         | 3.98       |
| Head              | 7         | 3.48       |
| Body              | 7         | 3.48       |
| Body and hands    | 5         | 2.49       |
| Legs              | 4         | 1.99       |
| Body. head. legs  | 3         | 1.49       |
| Body. head. legs  | 2         | 0.99       |
| Body and legs     | 1         | 0.49       |
| Head and hands    | 1         | 1.49       |
| No Data           | 7         | 3.48       |
| Total             | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Clinical Features

The most often distribution of clinical features found was erythematous macules or lesions in the form of red spots / plaques on the body.

Table 9. Distribution of psoriasis vulgaris patients' clinical features in Soetomo General Hospital (2016-2018)

| Clinical Features    | Frequency | Percentage |
|----------------------|-----------|------------|
| Erythematous macules | 182       | 90.54      |
| Scale                | 178       | 88.55      |
| Karsvlek phenomena   | 61        | 30.34      |
| Koebner phenomena    | 43        | 21.39      |
| Auspitz sign         | 41        | 20.39      |
| Pitting nail         | 7         | 3.48       |
| Geographic tongue    | 2         | 0.99       |
| No Data              | 6         | 2.98       |

### Psoriasis Vulgaris Patients's Degree of Severity

Psoriasis Area and Severity Index (PASI) is the most widely used method of measuring the severity of psoriasis. The most distribution of degree of severity in psoriasis vulgaris patients is those with PASI score >10 (severe).

Table 10. Distribution of psoriasis vulgaris patients' degree of severity in Soetomo General Hospital (2016-2018)

| Degree of Severity | Frequency | Percentage |
|--------------------|-----------|------------|
| <5                 | 9         | 4.48       |
| 5-10               | 23        | 11.44      |
| >10                | 44        | 21.89      |
| No Data            | 125       | 62.19      |

### Psoriasis Vulgaris Patients's Duration of Disease

The distribution of the patients' duration of disease before going to treatment in psoriasis vulgaris patients was more than 3 months.

Table 11. Distribution of psoriasis vulgaris patients' duration of disease in Soetomo General Hospital (2016-2018)

| Duration of Disease | Frequency | Percentage |
|---------------------|-----------|------------|
| ≤ 1 Month           | 45        | 22.39      |
| ≤ 2 Months          | 13        | 6.47       |
| ≤ 3 Months          | 8         | 3.98       |
| > 3 Months          | 91        | 45.27      |
| No Data             | 44        | 21.89      |
| Total               | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Histopathology examination

Table 12 shows that 99 of 201 patients underwent Histopathology examination of punch biopsy specimens. with 77 patients showing positive results on Histopathology examination. The results of the Histopathology examination showed that 13 patients were having other diseases. the most common disease was Seborrheic Dermatitis.

Table 12. Distribution of psoriasis vulgaris patients' histopathology examination in Soetomo General Hospital (2016-2018)

| Histopathology Examination                              | Frequency | Percentage |
|---|-----------|------------|
| Psoriasis vulgaris positive                             | 77        | 22.39      |
| Other diseases  | 13        | 6.46       |
| There were no features of psoriasis vulgaris            | 9         | 4.48       |
| Patients who did not perform histopathology examination | 102       | 50.75      |
| Total   | 201       | 100.00     |

### Psoriasis Vulgaris Patients's Therapy

Table 13 and 14 show that psoriasis vulgaris therapy in the Soetomo general hospital Surabaya in the period of 2016-2018. The data show that the topical medicine commonly given to the patients was Desoximetasone cream, dDesoximetasone cream + urea cream, Desoximetasone + mometasone furoate cream. The data did not show any UV treatment for psoriasis vulgaris patients in the Dermatology and Venerology Outpatient Department at Dr. Soetomo regional public hospital Surabaya, in the period of 2016-2018.

Table 13. Distribution of psoriasis vulgaris patients' systemic therapy in Soetomo General Hospital (2016-2018)

| Oral Medicine   | Frequency | Percentage |
|---|-----------|------------|
| Cetirizine  | 52        | 25.87      |
| Folic Acid + Cetirizine                                 | 16        | 7.96       |
| Folic Acid  | 12        | 5.97       |
| Loratadine  | 10        | 4.97       |
| Dexamethasone + Cetirizine                              | 5         | 2.49       |
| Insulin + Lidocaine HCL                                 | 4         | 1.99       |
| Cetirizine + Folic acid                                 | 4         | 1.99       |
| Folic acid + Loratadine                                 | 3         | 1.49       |
| Mebhydrolin napadisylate                                | 3         | 1.49       |
| Lidocaine + Cetirizine                                  | 1         | 1.49       |
| Lidocaine   | 2         | 0.99       |
| Insulin + Folic acid + cetirizine                       | 2         | 0.99       |
| Ketoconazole  | 1         | 0.49       |
| CTM   | 1         | 0.49       |
| Dexamethasone   | 1         | 0.49       |
| Ketonazole + Cetirizine                                 | 1         | 0.49       |
| CTM + Omeprazole  | 1         | 0.49       |
| Methotrexate + Natrium phosphate                        | 1         | 0.49       |
| Folic acid + CTM + Folic acid                           | 1         | 0.49       |
| Folic acid + methotrexate + clorfeniramin               | 1         | 0.49       |
| Folic acid + Clorfeniramin                              | 2         | 0.99       |
| Methotrexate + Folic acid + Loratadine                  | 1         | 0.49       |
| Loratadine + Folic acid                                 | 1         | 0.49       |
| Methotrexate  | 1         | 0.49       |
| Folic acid + Cetirizine                                 | 4         | 1.99       |
| Folic acid + Lidocain Insulin + Folic acid + Cetirizine | 1         | 0.49       |
| Folic acid + Folic acid                                 | 1         | 0.49       |
| Methotrexate + Cetirizine + Folic acid                  | 1         | 0.49       |
| Interhistin + Cetirizine                                | 1         | 0.49       |
| Methotrxate + Cetirizine                                | 2         | 0.99       |
| Dexamethason + CTM                                      | 1         | 0.49       |
| Folic acid + Folic acid                                 | 1         | 0.49       |
| Lansoparazole + Ulcera suspension + Domperidone         | 1         | 0.49       |
| Methylprednisolone + Methotrexate                       | 1         | 0.49       |
| No Data   | 64        | 31.84      |

Table 14. Distribution of Psoriasis Vulgaris Patients' Topical Therapy in Soetomo General Hospital period 2016-2018

| Topical Medicine  | Frequency | Percentage |
|---|-----------|------------|
| Desoximetasone cream  | 55        | 27.36      |
| Desoximetasone cream + Urea cream   | 21        | 10.45      |
| Desoximetasone cream + Mometasonfuroat cream                                | 10        | 4.97       |
| Mometasonfuroat cream   | 6         | 2.98       |
| Desoximetasone cream + Ketoconazole scalp sol 2%                            | 6         | 2.98       |
| Urea cream  | 5         | 2.49       |
| Fucilex cream   | 4         | 1.99       |
| Hydrocortisone cream  | 3         | 1.49       |
| Desoximetasone cream + Urea cream + Ketoconazole scalp sol 2%               | 3         | 1.49       |
| Desoximetasone cream + Urea cream + Mometasone cream                        | 3         | 1.49       |
| Desoximetasone cream + Ketoconazole scalp sol 2% + Mometasone furoate cream | 3         | 1.49       |
| Desoximetasone cream+ Mometasone furoate cream + Atopiclair lotion          | 3         | 1.49       |
| Hydrocortisone cream+ Urea cream  | 2         | 0.99       |
| Desoximetasone cream + Hydrocortisone cream                                 | 2         | 0.99       |
| Ketoconazole scalp sol 2%   | 1         | 0.49       |
| Soft u derm   | 1         | 0.49       |
| Natrium fusidate cream  | 1         | 0.49       |
| Tupepe Foot cream   | 1         | 0.49       |
| Inerson ointment  | 1         | 0.49       |
| AHA 8% + Tretinoiin   | 1         | 0.49       |
| Soft u derm + Urea cream  | 1         | 0.49       |
| Fucilex cream + Desoximetasone cream  | 1         | 0.49       |
| Desoximetasone cream + Tupepe foot cream                                    | 1         | 0.49       |
| Desoximetasone cream + Mometasone furoate cream                             | 1         | 0.49       |
| Desoximetasone cream + Fuson cream  | 1         | 0.49       |
| Soft u derm + Urea cream + Fuson cream                                      | 1         | 0.49       |
| Desoximetasone cream + Fucilex cream  | 1         | 0.49       |
| Desoximetasone cream + Natrium fusidate cream                               | 1         | 0.49       |
| Mometasone furoate cream + Ketoconazole scalp sol 2%                        | 1         | 0.49       |
| Desoximetasone cream + Ketomed ss shampoo                                   | 1         | 0.49       |
| Mometasone furoate cream + Ketoconazole scalp sol 2%                        | 1         | 0.49       |
| Mometasone furoate + Urea cream   | 1         | 0.49       |
| Mometasone furoate cream + Tupepe foot cream                                | 1         | 0.49       |
| Desoximetasone cream + Desonide lotion                                      | 1         | 0.49       |
| Desoximetasone cream + Urea cream + Hydrocortisone cream                    | 1         | 0.49       |
| Desoximetasone cream + Soft u derm 20GRAM + Interzol ss                     | 1         | 0.49       |
| Desoximetasone cream + Mometasone cream + Soft u derm                       | 1         | 0.49       |
| Hydrocortisone cream + Ketoconazole 2,5% + Ketoconazol scalp sol            | 1         | 0.49       |
| Mometasone furoate cream + Urea cream + Ketoconazole shampoo                | 1         | 0.49       |
| Mometasone furoate cream + Desoximetasone cream + Natrium fusidate cream    | 1         | 0.49       |
| Desoximetasone cream + Fucilex cream + Tupepe foot cream                    | 1         | 0.49       |
| Desoximetasone cream + Vaseline alba + Folic acid                           | 1         | 0.49       |
| Desoximetasone cream + Soft u derm + Zaloral + Fucilex ointment             | 1         | 0.49       |
| Ketoconazole scalp sol 2% + Desoximetasone + Zoloral                        | 1         | 0.49       |
| Desoximetasone cream + Soft u derm + Zoloral                                | 1         | 0.49       |
| Ketoconazole scalp 2% + Fuson cream + Desoximetasone cream                  | 1         | 0.49       |
| Total   | 41        | 20.40      |

## DISCUSSION

This retrospective study took 201 patients as samples. Based on data that has been obtained from 2016 to 2018, it can be seen that the highest number of psoriasis vulgaris patients was in 2017, as many as 75 patients or 37.31%. It then was followed by the number of psoriasis vulgaris patients in 2018 that were 72 patients (35.82%), and the number of patients in 2016 that were as many as 54 patients (26.87%). If we observe it carefully, the number of psoriasis vulgaris patients from 2016 to 2017 tends to increase, but from 2017 to 2018 it has decreased.

The increase in psoriasis vulgaris patients in the Dermatology and Venerology Outpatient Department at Soetomo General Hospital regional public hospital Surabaya in 2016-2018 was probably caused by the number of patients who relapsed into severe psoriasis vulgaris, so they should go for medical treatment at Soetomo General Hospital Surabaya. The decline in psoriasis vulgaris patients in the Dermatology and Venerology Outpatient Department at Soetomo General Hospital Surabaya from 2017 to 2018 may be caused by the health insurance policy (BPJS): Soetomo General Hospital Surabaya that becomes referral hospital for severe medical cases accepts Insurance and Social Security (BPJS) participants.

Based on the distribution of the most patient age group, the early elderly (46-55 years) was the most likely to suffer from severe psoriasis vulgaris. It was approximately 54 patients (26.87%). The youngest psoriasis vulgaris patients was 2 years old. There were 2 patients; 1 patient was tested positive for psoriasis vulgaris on histopathological examination and another did not undergo histopathological examination. The oldest psoriasis vulgaris patient was 84 years old. These results seem similar to the previous research done by Eko Krisnarto and his colleagues in 2016 which showed that the most cases occurred in 46-to-55-year category<sup>(10)</sup>. Based on the literature it is stated that psoriasis vulgaris usually affects patients of productive age (45 years), so the effect of psychological stress on the sufferer becomes one of the triggering factors<sup>(3)</sup>. Based on the results of the study, the prevalence mostly occurred to the age of 46-55 years old. It is suspected that during that range of age, there are many factors that trigger stress due to reduced financial conditions so that many patients choose to go to Soetomo General Hospital Surabaya that accepts BPJS participants.

Based on the sex group, male patients are higher than female patients. There were 103 male patients or 51.24%, and there were 98 female patients or 48.76%. The results of this study are in accordance with previous research done by Dewa Ayu Putri and I Gusti Ayu which stated that the prevalence of psoriasis vulgaris in the Dermatology and Venerology Polyclinic of Sanglah Hospital in Denpasar for during January 2012 to December 2014 was 70, with 64.29% male patents and 35.71% female patient<sup>(11)</sup>. There were 15,794 patients with psoriasis vulgaris in Malaysia from 2007 to 2016, 56.6% were male and 43.4% were female<sup>(12)</sup>. Based on the theory, the number of men and women who suffer from psoriasis vulgaris is the same<sup>(13)</sup>.

Based on Table 3, it shows that psoriasis vulgaris patients' occupation in this study was found to be quite diverse. Psoriasis vulgaris patients are mostly working as private employees. They are about 91 patients or 45.27%. According to Adriani Sekar Cantika in her research in 2012, as many as 61.5% of patients complained about their work which then triggered stress. The possibility that work can trigger stress and disrupt the immune system, cause the relapse<sup>(14)</sup>.

The most triggering factor was hypertension, in 54 patients (26.86%). Other triggering factors were UV light exposure in 26 (12.93%) patients, diabetes in 19 (9.45%) patients, and drugs in 12 (5.97%) patients. Based on several studies, the increase of psoriasis vulgaris risk is more than 3 times in people with hypertension<sup>(15)</sup>. Inflammation occurring in various organs contributes to insulin resistance; it happens in the pre-diabetic stage in which the body does not respond to the glucose regulating hormone insulin. Psoriasis vulgaris and comorbidities have the same etiology. Its association in the hypothesis is that pro-inflammatory cytokines contribute to dyslipidemia, atherogenesis, peripheral insulin resistance, type II diabetes, and hypertension. Many researchers reported a strong association between psoriasis vulgaris and diabetes, hypertension and hyperlipidemia<sup>(16)</sup>. The association between psoriasis vulgaris and hypertension can be attributed to the elevated levels of angiotensin converting enzyme, endothelin-1, and renin in patients with psoriasis vulgaris. There are many factors playing a role in the emergence of this disease, especially genetic and immunological factors, as well as interactions with the environment as a trigger<sup>(17)</sup>, shows that the complaints commonly felt by patients with psoriasis vulgaris are red spots showing as many as 133 patients (66.17%), but other complaints were also found, namely itching, scaly skin and burning sensation. It is in accordance with the research of Adriani Sekar Cantika stating that the main complaints of psoriasis vulgaris can be in the form of itching, pain, smarting and burning sensation in the area affected by the lesion<sup>(14)</sup>.

Psoriasis vulgaris is a chronic residif disease, meaning it is chronic and recurs easily. Chronic residif in patients with psoriasis vulgaris in the Dermatology and Venerology Outpatient Department at Soetomo General Hospital in the period of 2016-2018, the data obtained were 124 patients or 61.69%. It is in accordance with the literature stating that psoriasis vulgaris is a chronic residif disease with various possible trigger factors<sup>(3)</sup>.

Distribution data in Table 7 shows the majority of patients with psoriasis vulgaris in the Dermatology and Venerology Outpatient Department at Soetomo General Hospital Surabaya in the period of 2016-2018. There was no data on complaints of the patient's family history, which was 195 patients or 97.02%. The absence of family history data in patients with psoriasis vulgaris is presumably due to the fact that there are quite a number of

medical records having been unfilled in completely. Based on the literature that there are several clinical histories affecting the clinical development of psoriasis vulgaris. One influential clinical history is a family history of similar illnesses. The main known gene for psoriasis vulgaris is the Human Leukocyte Antigen (HLA) gene. These genes tend to vary in different racial and ethnic backgrounds. In addition to the HLA gene, cytokines also have a role in the immunopathogenesis of psoriasis vulgaris<sup>(8)</sup>. Although the genetic association of psoriasis vulgaris is not certain, it is suspected that there is association of a family history with the occurrence of psoriasis vulgaris in the future<sup>(1)</sup>.

In this study, it was found that the most frequent location of psoriasis vulgaris was generalized or the whole body of 115 patients or 57.21%. This study is in accordance with Paola Di Meglio and colleagues stating that psoriasis vulgaris occurs mainly on the extensor surfaces of the elbows and knees, on the scalp, and on the lower back, but it can affect every area of the body.

Based on the distribution of clinical profile of patients with psoriasis vulgaris, the most commonly found were erythematous macules as many as 182 patients or 90.54%. Other clinical profile include scale, carcinoma phenomenon, Koebner phenomenon, Auspitz sign, pitting nail, and geographic tongue. Clinical profile of psoriasis vulgaris patients in the Dermatology and Venereology Outpatient Department at Soetomo General Hospital Surabaya is in accordance with the literature stating that the lesions in psoriasis vulgaris begin as erythematous macules or papules, expand peripherally and coalesce to form plaques. The lesions are round or oval plaques that are silvery-white, dry and scaly. New lesions resulting from skin trauma, known as Koebner's phenomenon. The clinical profile that often occurs is the Auspitz sign, in which a mild disturbance of the superficial layer of the lesion is bleeding<sup>(18)</sup>.

The severity level of psoriasis vulgaris is determined by Psoriasis Area Severity Index (PASI)<sup>(8)</sup>. According to the Management Flowchart of psoriasis vulgaris (Plaque Type) in Indonesia in 2019, the severity level based on the score of PASI is divided into 3 categories, namely < 5 (mild), 5-10 (moderate), > 10 (severe)<sup>(19)</sup>. The results showed that the patients with psoriasis vulgaris at Soetomo General Hospital Surabaya for the period of 2016-2018 was most affected by psoriasis vulgaris with the severity level in the severe category, namely 44 patients or 21.89%. The results obtained are in accordance with previous studies stating that the severity level of patients with psoriasis vulgaris at Dr. Saiful Anwar Malang, namely 4 patients with mild category, 10 patients with moderate category and 11 patients with severe category<sup>(20)</sup>. Based on the results of the research obtained, the severe category of severity level is the category with the most number of patients. It is suspected to be a cause for patients to seek treatment immediately to be able to deal with the disease.

Based on Table 10, it shows that the longest suffering in patients with psoriasis vulgaris was found in the category of more than 3 months as many as 91 patients (45.27%). The results obtained are in accordance with previous studies stating the majority of patients suffer from psoriasis vulgaris for more than 10 years, and the older the age of psoriasis vulgaris, the more severe the severity level<sup>(21)</sup>. Possible factor affecting the duration of suffering in patients with psoriasis vulgaris based on medical record data collection is the majority of elderly patients are likely to suffer from more comorbid diseases that can affect the severity of psoriasis vulgaris. The results of this study are in accordance with the theory of psoriasis vulgaris, which is a chronic residif (chronic disease and easy recurrence).

Based on Table 11, it is recognized that 99 patients (49.25%) undergoing histopathological examination, and 38.31% of them were positive for psoriasis vulgaris. The results of the histopathological examination showed that other diseases were seborrheic dermatitis, erythematous lupus, pityriasis rosea and pityriasis pulbra. In addition, it was discovered that some patients did not show psoriasis vulgaris from the results of histopathological examination. The histopathological profile of psoriasis vulgaris vary widely according to the course of the disease<sup>(2)</sup>. The histopathological profile of psoriasis is characterized by acanthosis with regular lengthening of the rete ridges with thickening at the bottom, thinning of the epidermal suprapapilla, pale upper layer of the epidermis, reduced to loss of the granulosum layer, parakeratosis, Munro microabscess, dermal papillae lengthening and edema, and dilated capillaries. The presence of Munro microabscesses and Kogoj spongiform pustules is a specific histological diagnosis of psoriasis<sup>(22)</sup>. The lesions in psoriasis vulgaris and seborrheic dermatitis are difficult to be distinguished. Therefore, it is necessary to perform a histopathological examination to differentiate the two diseases. The most significant diagnostic sign in seborrheic dermatitis is the presence of shoulder parakeratosis<sup>(23)</sup>.

Table 12 and Table 13 show that patients receive systemic and topical therapy. The most systemic therapy performed was cetirizine in 52 patients or 25.87%, and the most topical therapy was desoxymethasone cream in 55 patients or 27.36%. There is no data on medical records for phototherapy. Cetirizine is not in accordance with the Clinical Practical Guide (*Panduan Praktis Klinis; PPK*) therapy of the SMF Dermatology and Venereal Health Sciences of Soetomo General Hospital Surabaya because cetirizine is an oral drug that only relieves itching<sup>(13)</sup>. Methotrexate is used for oral medication in psoriasis vulgaris lesions, and when the patient is not taking methotrexate, it is recommended to take folic acid tablets<sup>(13)</sup>. There are many patients receiving more than one therapy. The drugs most commonly used for psoriasis vulgaris are topical corticosteroids, but long-term use can cause a variety of side effects. Apart from corticosteroids, calcipotriol is a topical drug that experiences less side effects.



## 2 CONCLUSION

Based on the results of the study, it can be concluded the prevalence of psoriasis vulgaris patients at the Soetomo General Hospital, Surabaya period 2016-2018 were 201 patients. The patients were mostly male, this is probably because most men are head of the family which causes stress levels in men higher and several factors trigger psoriasis which are more frequent in men such as drinking alcohol, smoking and doing more activities than women. The largest age group was at the age of 46-55 years, this is because the prevalence mostly occurred to the age of 46-55 years old. It is suspected that during that range of age, there are many factors that trigger stress due to reduced financial conditions so that many patients choose to go to Soetomo General Hospital Surabaya that accepts BPJS participants and the patients occupation were mostly private employees. The triggering factor that triggers psoriasis vulgaris was comorbid hypertension, the most common complaint was red spots, clinical features of the most common lesions are erythematous macules, psoriasis vulgaris patients have chronic residivist, the location of the most common lesions was the whole body, the duration of disease at most was more than 3 months. The most systemic therapy in psoriasis vulgaris patients was cetirizine and the most used topical therapy was desoxymethasone cream.

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PAGE 1

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PAGE 2

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PAGE 3

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PAGE 6

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PAGE 8

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