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## Incidence and characteristic of psoriasis patients at Sanjiwani Gianyar Regional Hospital 2018-2019

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### ABSTRACT

**Introduction:** Psoriasis is a chronic inflammatory skin disease characterized by firmly demarcated red plaque covered by a thick squama due to impaired proliferation and differentiation of the epidermis. Diagnosis of psoriasis is based on history taking and clinical features. Treatment is determined based on the patient's clinical characteristics and the severity of the disease. This retrospective study aims to determine the incidence, characteristics, and treatment options of psoriasis patients in the Dermatology and Venereology Polyclinic of Sanjiwani Gianyar Regional Hospital in 2018-2019.

**Methods:** A retrospective study of psoriasis patients at Sanjiwani Gianyar Regional Hospital in 2018-2019. Data collected from medical records includes sociodemographic data, clinical data, and patient treatment history.

**Results:** Within two years, there were 53 cases of psoriasis.

The dominance of psoriasis cases was found in men with a ratio of women and men 1:2.31. Of total 53 patients, 37 were male (69.81%) and 16 female patients (30.19%). The most common type was psoriasis vulgaris (73.58%). The most age group was 31-45 years. The most commonly given regimen of therapy was topical corticosteroids plus oral antihistamines (45.28%). The most widely given systemic therapy was methotrexate. Accompanying skin infections were found in 6 cases of psoriasis (11.32%).

**Conclusion:** Based on the results of the study, there were 53 new cases of psoriasis in 2018-2019, psoriasis vulgaris was the most common, the most age group was 31-45 years old, topical corticosteroids with antihistamines were still the main treatment options for psoriasis patients in Sanjiwani Gianyar Regional Hospital.

**Keywords:** psoriasis, Gianyar, incidence

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### INTRODUCTION

Psoriasis is a chronic inflammatory skin disease characterized by firmly demarcated red plaque covered by a thick squama due to impaired proliferation and differentiation of the epidermis. Psoriasis vulgaris is the most common form of psoriasis and affects about 90% of people with psoriasis. Psoriasis vulgaris is characterized by typical lesions of erythematous plaques and thick scales with a symmetrical distribution tendency. Sites of predilection include the extensor extremities of elbows and knees, lumbosacral, buttocks, and genital area. Scales are thickened, constantly covering the erythematous plaques.<sup>1</sup> The cause of psoriasis is not fully known. Multiple factors such as genetic, immunologic, and environmental interactions may trigger the disease.<sup>2</sup>

Psoriasis is found worldwide. It can affect men and women of all ages and ethnicities in all countries. An estimated 3% of the world's total population have psoriasis, with a sex ratio of 1:1 between male and female in adults.<sup>3</sup> Data from dr. Cipto Mangunkusumo General Hospital in Jakarta shows 338 cases of psoriasis (2.39%) from 2000 to

2002. While in Sanglah Hospital Denpasar, there were 156 cases (1.4%) in 2009.<sup>4</sup>

Based on literatures, psoriasis can increase the risk of depression, anxiety, and suicidality among patients. In consistent with previous research, psoriasis has moderate to severe negative impacts on patients' quality of life due to alteration in their daily activities. Psoriasis can also cause significant morbidity due to the possibility of developing psoriatic arthritis and other systemic diseases.<sup>4</sup> Psoriasis Area Severity Index (PASI) is a tool used to measure psoriasis lesions' severity. Fredrickson and Pettersson first formulated PASI measurement. It is now often used in clinical evaluation. Scores of PASI is ranging from 0-72. PASI calculate the range between 0 and 72 with an increase of 0.1 unit, so it is widely used in the pharmacy research setting. PASI is subgrouped into mild (PASI <7), moderate (PASI 7-12), and severe (PASI >12).<sup>5</sup>

This retrospective aimed to evaluate patients' characteristics, number of cases, types of psoriasis, and therapeutic regimens of psoriasis patients in Dermatovenereology Polyclinic of Sanjiwani General Hospital Gianyar.

## MATERIAL AND METHOD

This research is a two years retrospective study in Dermatology and Venereology Polyclinic and Medical Records Department of Sanjiwani General Hospital Gianyar. Data of psoriasis patients in 2018-2019 were collected from medical records, including sociodemographics, clinical data, and patient treatment history.

## RESULTS

A retrospective descriptive study of psoriasis was conducted at Dermatology and Venereology Polyclinic and Medical Records Department of Sanjiwani General Hospital Gianyar between January 2018 until December 2019. There were 53

psoriasis patients in Dermatovenereology Polyclinic Sanjiwani General Hospital between January 2018 and December 2019.

There were more male than female patients in our study. Psoriasis cases were predominantly found in men, with a female-to-male ratio 1:2.31. Thirty-seven of 53 (69.81%) patients were male, and 16 (30.19) were female. Patients were subgrouped into five age groups, i.e., under 15 years old, 15-30 years old, 31-45 years old, 46-60 years old, and over 60 years old. Patients were mostly in the age group of 31-45 years old (41.51%). According to the disease form, patients were subgrouped into four groups; psoriasis vulgaris, guttate psoriasis, pustular psoriasis, and sebopsoriasis. Most cases, as many as 39 patients (73.58%), had psoriasis vulgaris. While the least psoriasis type, pustular psoriasis, was found on one patient (1.87%). A combination of topical steroid and oral antihistamine was the common therapeutic regimen used in patients (45.28%). Meanwhile, topical corticosteroids and antifungal are only used in 2 patients, specifically in the sebopsoriasis type. Methotrexate is one of the systemic therapy that most frequently given to patients (43.40%). Laboratory examinations such as liver function test (serum glutamic oxaloacetic transaminase and serum glutamic-pyruvic transaminase), renal function test (blood urea nitrogen and serum creatinine), and lipid profile were done in patients before giving systemic therapy. Another comorbid skin disease was found in some patients, such as onychomycosis, acneiform eruption, and foot ulcer.

## DISCUSSION

Psoriasis was more found in men, as many as 37 patients (69.81%) with a male-to-female ratio of 2.31:1. It can be caused because men more often smoke and drinks alcohol as the risk factors.

In our study, patients were mostly in the 31-45 years age group. It can be caused by psychological stress that usually happened in that age range. It is consistent with the literature, which shows that 68% of psoriasis patients indicate that psychological factors lead to more severe disease.<sup>12</sup> Other study conducted by Novita Dewi at Sanglah General Hospital in 2012-2014 also found that most patients were at 31-45 years age group<sup>13</sup>

Body surface area (BSA) is a measurement that describes the percentage of affected body surface area. The importance of determining BSA is to determine the treatment regimen. Based on BSA, the severity of psoriasis vulgaris is subgrouped into mild, moderate, and severe. It is said to be severe if BSA >30%, moderate if BSA >10%, and mild if BSA <10%.<sup>1</sup>

**Table 1. Distribution characteristics of psoriasis patients in Dermatovenereology Polyclinic Sanjiwani, Gianyar Regional Hospital 2018-2019**

Characteristics	N	%
<b>Gender</b>		
Man	37	69.81
Woman	16	30.19
<b>Age</b>		
<15	0	0
15-30	10	18.87
31-45	22	41.51
46-60	18	33.96
>60	3	5.72
<b>Psoriasis type</b>		
Psoriasis vulgaris	39	73.58
Guttate psoriasis	11	20.75
Pustular psoriasis	1	1.87
Sebopsoriasis	2	3.8
<b>Treatment regimen</b>		
<b>Topical</b>		
Emollient	0	0
Corticosteroid	14	26.41
Emollient + corticosteroid	0	0
<b>Oral</b>		
Oral antihistamine	7	13.21
<b>Combination</b>		
Emollient + antihistamine	5	9.43
Topical corticosteroid + antihistamine	24	45.28
Topical combination + systemic corticosteroid	0	0
Topical combination + antifungal	2	3.78
Topical combination + antibacterial	1	1.89
<b>Systemic therapy</b>		
Methotrexate	23	43.40
Cyclosporin	1	1.88
Not given	29	54.72
<b>Other skin disease</b>		
Present	6	11.32
Not present	47	88.68

There are three treatment options for psoriasis includes topical therapy, phototherapy, and systemic antimetabolic. Patients with BSA <10% are given topical treatment such as topical corticosteroids and D3 analogs. In psoriasis with BSA > 10%, topical therapy is combined with phototherapy. Narrowband UVB (NB-UVB) and broadband UVB (BB-UVB) are the first choices for phototherapy, while psoralen and UVA (PUVA), excimer laser, and climatotherapy is the second line.

In our study, the therapeutic regimen most commonly given as a combination of topical corticosteroids and oral antihistamines was found in 45.28% of patients. Topical corticosteroid and antifungal were used in 2 cases, especially in seborrheic dermatitis patients. Systemic therapy was given to patients with BSA >30%, and the first-line systemic therapy, methotrexate, was the most frequently used. In severe psoriasis with BSA >30%, patients can be treated by all regimen choices, combined with systemic therapy such as methotrexate, acitretin, alefacept, etanercept, adalimumab, infliximab, and ustekinumab as the first line; and fumaric acid ester (FAE), cyclosporin A, and other agents such as hydroxyurea, 6-thioguanine, cellcept, and sulfasalazine as the second line. Cyclosporine A is not considered as the first-line systemic therapy because of its long-term side effects, but it is very useful in short time therapy for the induction of remission.<sup>6</sup>

## CONCLUSION

According to this retrospective study of psoriasis patients in Dermatology and Venereology Polyclinic Sanjiwani General Hospital in January 2018-December 2019, 53 cases of psoriasis came into Dermatovenereology Polyclinic of Sanjiwani General Hospital from January 2018-December 2019. Men were more commonly affected than women. The most common form of psoriasis was psoriasis vulgaris. Most patients were in the 31-45 years age group. The most frequently used therapeutic regimen was the combination of topical corticosteroid and antihistamine, while the most systemic therapy used was methotrexate. There were only 6 cases with other skin diseases as comorbid.

## CONFLICT OF INTEREST

None declared.

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## AUTHORS CONTRIBUTIONS

All authors contributed regarding this publication.

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