

Original Research Article

Incidence and profile of psoriasis in the dermatology-venereology department Bali Mandara General Hospital, Denpasar during 2020-2022

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ABSTRACT

Background: Psoriasis is a chronic inflammatory disease mediated by the immune system that mainly involves skin inflammation, epidermal hyperplasia, enriched risk of destructive arthritis, and cardiovascular morbidity. Accurate epidemiology of psoriasis is limited, just very few studies on the incidence of psoriasis. This study aims to determine the incidence and profile of psoriasis patients at the dermatology and venereology polyclinic, Bali Mandara General Hospital Denpasar Bali, 2020 to 2022.

Methods: This research is a descriptive cross-sectional retrospective study at the dermatology-venereology polyclinic of Bali Mandara General Hospital Denpasar from May to June 2023 and uses secondary data from the patient register book and medical records with total sampling. Samples were all new cases that met the inclusion and exclusion criteria would be sampled. Data were analyzed with statistical package for the social sciences (SPSS) 28 for Windows, categorized by numbers and percentages, providing cross-tabulations for age and sex variables.

Results: Psoriasis was grouped into five types. Psoriasis vulgaris is the most common type with total of 71 (85.5%) patients, guttate psoriasis 6 (7.2%), sebopsoriasis 5 (6.0%) patients, pustular psoriasis 1 (1.2%) patients, and psoriasis erythroderma 0 (0%) patients.

Conclusions: Psoriasis vulgaris is the most common type of psoriasis. It occurs more frequently in the age, 20-30 to 50-60 years. According to studies, the incidence of psoriasis by sex between males and females is equally the same. We present data categorized by numbers and percentages, providing cross-tabulations for age and sex variables.

Keywords: Psoriasis, Incidence, Sex, Age, Type of psoriasis

INTRODUCTION

Psoriasis is a chronic inflammatory disease mediated by the immune system that mainly involves skin inflammation, epidermal hyperplasia, enriched risk of destructive arthritis, and cardiovascular morbidity. Patients with psoriasis also experience physiological challenges that lead to lower quality of life. The clinical appearance of psoriasis is well-defined erythematous plaques with thick silvery-white scales. Psoriasis lesions were commonly symmetrical and distributed on the scalp,

elbows, knees, lower lumbosacral region, buttocks, and genital area. The size of the lesions varies from small papules to plaques that cover large areas of the body. The etiology of psoriasis is multifactorial and involves a complex interplay of genetic, immune, and environmental factors. Psoriasis is widespread worldwide, but prevalence and incidence vary. Essential factors that play an important role in the variation of psoriasis in incidence and prevalence include age, sex, geography, and ethnicity. Factors within psoriasis also account for variations in remission-relapse periods, differences in clinical presentation, and variations in severity.¹⁻³

Accurate figures regarding the epidemiology of psoriasis are limited, just very few studies on the incidence of psoriasis. Registration of psoriasis cases is optional, meaning reliable data are difficult to obtain. A review of published literature revealed only a handful of credible studies on the incidence of psoriasis. One study showed the prevalence of 2-3% of the population, affecting around 125 million people worldwide.^{2,4,5}

The 2020 US census data shows an estimated 7.55 million US adults with psoriasis. Psoriasis prevalence was similar between women and men, with 3.2% in women and 2.8% in men.⁶ Some research reported the incidence of psoriasis in all ages, with the disease varying from 31.4 per 100 000 person-years in Eastern Europe. Western Europe's incidence is 521.1 per 100 000 person-years.⁷

There is no research data regarding the incidence of psoriasis in Indonesia. However, research conducted at Dr. Soetomo Hospital in Surabaya found 80 patients with psoriasis from 2016 to 2018.⁸ Meanwhile, in a study conducted at Sanglah Hospital Denpasar, there were 70 cases of psoriasis from 2012 to 2014.⁹

This study aims to determine the incidence and profile of psoriasis patients at the Dermatology and Venereology Polyclinic, Bali Mandara General Hospital Denpasar, 2020 to 2022.

METHODS

This research is a descriptive cross-sectional retrospective study at the dermatology-venereology Polyclinic of Bali

Mandara General Hospital Denpasar carried out from May to June 2023. This study used secondary data from the patient register book and medical records in the dermatology-venereology Polyclinic Bali Mandara General Hospital Denpasar from 2020-2023. The sample size in this study is 83 patients. This study's inclusion criterion were all new patients diagnosed with psoriasis at the polyclinic in Bali Mandara General Hospital Denpasar from 2020-2023, diagnosed by a dermatologist based on anamnesis, physical examination and supporting examinations. The data will be grouped according to sex, age and type of the psoriasis. This study's exclusion criterion are patients who previously came to polyclinic in Bali Mandara General Hospital Denpasar from 2020-2023 and have already been diagnosed with psoriasis. All data were analyzed with statistical package for the social sciences (SPSS) 28 for Windows. We present data categorized by numbers and percentages, providing cross-tabulations for age and sex variables. This research received approval from the dermatology-venereology department in Bali Mandara General Hospital Denpasar on 31 May 2023.

RESULTS

Table 1 shows that total incidence of psoriasis taken from medical records at the dermatology-venereology Polyclinic, Bali Mandara General Hospital, from 2020 to 2022. In this research, Psoriasis patients were grouped according to sex, age, and type of psoriasis. There are 83 patients obtained from medical records. Male patients are more frequent than females, with 55 (66.3%) male and 28 (33.7%) female patients. The ratio of patients based on gender from 2020 to 2022 is 2:1.

Table 1: Profile of psoriasis patients at the skin and venereology polyclinic, Bali Mandara General Hospital Denpasar 2020 to 2022.

Profile	Year			Total	Percentage (%)
	2020 (N=30) (%)	2021 (N=24) (%)	2022 (N=29) (%)		
Sex					
Male	19 (63.3)	17 (70.8)	19 (65.5)	55	66.3
Female	11 (36.7)	7 (29.2)	10 (34.5)	28	33.7
Age (year)					
<15	1 (3.3)	2 (8.3)	0 (0)	3	3.6
15-30	5 (16.7)	9 (37.5)	5 (17.5)	19	22.9
31-45	10 (33.3)	4 (16.7)	11 (37.9)	25	30.1
46-60	11 (36.7)	7 (29.2)	6 (20.7)	24	28.9
>60	3 (10.0)	2 (8.3)	7 (24.1)	12	14.5
Psoriasis type					
Psoriasis vulgaris	25 (83.3)	20 (83.3)	26 (89.7)	71	85.5
Guttate psoriasis	2 (6.7)	3 (12.5)	1 (3.4)	6	7.2
Pustular psoriasis	1 (3.3)	0 (0)	0 (0)	1	1.2
Sebopsoriasis	2 (6.7)	1 (4.2)	2 (6.9)	5	6.0
Erythrodermic psoriasis	0 (0)	0 (0)	0 (0)	0	0

Based on age, most cases are in the age range of 31 to 45 years, with a total of 25 (30.1%) patients, with the second highest number being the age group 46 to 60 years, with a

total of 24 (28.9%) patients, then aged 15 to 30 years with a total of 19 (22.9%) patients, age group >60 years with a total of 12 (14.5%) patients.

In this study, psoriasis was grouped into five types. Psoriasis vulgaris is the most common type with total of 71 (85.5%) patients, guttate psoriasis 6 (7.2%), seborrheic psoriasis 5 (6.0%) patients, pustular psoriasis 1 (1.2%) patients, and psoriasis erythroderma 0 (0%) patients.

In 2020, 30 psoriasis patients were dominated by males, with a total of 19 (63.3%) male patients and 11 (36.3%) female patients. The age range in 2020 is 46 to 60 years, with 11 (36.7%) patients. Psoriasis vulgaris was the most cases type, with 25 (83.3%) patients.

The incidence of psoriasis in 2021 with 24 psoriasis patients. The number of males also dominates, with 17 (70.8%) patients and 7 (29.2%) female patients. The highest age range in 2021 is the age of 15 to 30 years, with 9 (37.5%) patients. The most common type was psoriasis vulgaris, namely 20 (83.3%) patients.

Psoriasis cases in 2022 with a total of 29 patients. There were male patients, with 19 (65.5%) and 10 (34.4%) female patients. The age range is 31-45, with 11 (37.9%) patients. Type psoriasis vulgaris, with 26 (89.7%) cases, is the most common among others.

DISCUSSION

From 2020 to 2022, the number of psoriasis incidents in dermatology and venereology polyclinic at Bali Mandara General Hospital, Denpasar, is 83 cases. Most of the case is psoriasis vulgaris, with 85.5%. Moreover, according to the study, psoriasis vulgaris is the most common type. It is usually found in 90% of cases among other types of psoriasis.¹⁰

In this study, age was grouped into five groups. The highest age range is between 31 to 45 years, followed by age group 46 to 60. According to a study by Armstrong, psoriasis can occur at any age, even in babies. However, mostly two age peaks of psoriasis, starting from 20 to 30 years and then from 50 to 60. Another research at Sanglah Hospital in Denpasar from 2012 to 2014 showed that the most common age of psoriasis cases was 31 to 60. This result supports the theory from a theoretical basis.¹¹

Based on gender in this research, from 2020 to 2022, it was found that the number of cases in males was higher than in females, with 66.3% of male cases and 33.7% of female cases. According to studies, the incidence of psoriasis by sex between males and females is equally the same. Michelle et al reported their research from 2013 to 2015 at Prof. Dr. R. D. Hospital, Kandou Manado, out of 109 cases of psoriasis, 57.98% were men, and 42.02% were women.¹² In a study by Lisa et al at the NTB Provincial Hospital from 2016 to 2020, 47.9% were found in females and 52.1% in males.¹

The limitations of this study are many different and no definite theory regarding psoriasis. The Differentiation is because psoriasis can develop differently in each person.

Too many factors can trigger psoriasis, making it hard to know the main cause of psoriasis, which is yet to be discovered. Therefore, a drug to cure psoriasis has yet to find. The medicine given is only based on the symptoms from the clinical appearance.^{2,4,5}

CONCLUSION

Psoriasis vulgaris is the most common type among other types of psoriasis. It occurs more frequently in the age range between two age peaks, 20-30 to 50-60 years. According to studies, the incidence of psoriasis by sex between males and females is equally the same. We present data categorized by numbers and percentages, providing cross-tabulations for age and sex variables.

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