

Characteristics of Vitiligo Patients in Dermatology and Venereology Outpatient Clinic Unit at Bali Mandara General Hospital 2021-2022

Putu Sasmita Putri Mahadewi¹, Luh Putu Dina Wahyuni²

¹Intern Doctor, Bali Mandara General Hospital, Denpasar, Bali, Indonesia

²Department of Dermatology and Venereology, Bali Mandara General Hospital, Denpasar, Bali, Indonesia

ABSTRACT

Vitiligo is a depigmentation disorder characterized by the distinct macules or depigmented patches, which are often asymptomatic. Age and geographic location have an impact on the prevalence of vitiligo. This condition affects 0.5-2% of the global population and is caused by a combination of factors, including clinical symptoms and therapeutic outcomes. Methods: The research material was taken from the medical record of vitiligo patients in the Outpatient Clinic Dermatovenereology Bali Mandara General Hospital from 2021-2022. The data were analyzed descriptively using SPSS program version 26 for Windows. Result: This study collected 198 visits from vitiligo patients at the Bali Mandara General Hospital Dermatovenereology outpatient clinic. The predominant gender is female (55.1%), with late adolescents comprising 36.4%, students accounting for 38.4%, and the development of vitiligo occurring within 1-5 years for 54% of cases; 63.1% of patients lacked a familial history of vitiligo. The predominant clinical kind is non-segmental vitiligo (59.1%), and the most frequently used treatment is excimer light phototherapy (85.9%). Conclusion: Vitiligo patients at Bali Mandara hospital, Denpasar, mostly female aged 17-25 years old, with non-segmental vitiligo. The most common therapies given are excimer light phototherapy.

KEYWORDS: vitiligo, characteristics, and clinical features.

ARTICLE DETAILS

Published On:
01 January 2025

Available on:
<https://ijmscr.org/>

INTRODUCTION

Vitiligo is a common autoimmune illness that causes skin depigmentation. It can range from a few small spots to nearly whole bald regions. A totally amelanotic, nonscaly, chalky-white macule with clear borders is the defining lesion.¹ The lesion is characterized by distinct macules or depigmented patches, which are often asymptomatic.²

Age and geographic location have an impact on the prevalence of vitiligo. This condition affects 0.5-2% of the global population and is caused by a combination of factors, including clinical symptoms and therapeutic outcomes.³ Around half of those with vitiligo get it before the age of 20, and the chance of developing it decreases with age. Vitiligo frequently begins in infancy or early adulthood.⁴

There are currently few data on vitiligo epidemiology in Indonesia, and no precise data exist that explains the incidence rate of vitiligo in each province. Several hospitals have reported different statistics. For example, Dr. Soetomo General Hospital Surabaya identified 115 cases from 2018-

2020⁵. The most recent statistics on vitiligo cases, obtained especially at Prof. Ngoerah General Hospital over four years from 2020 to 2023, revealed only 22 cases.⁶

Based on its distribution pattern, vitiligo is divided into two clinical types: segmental and nonsegmental. It has impact on society and is still a challenging illness to cure. Vitiligo is still a global concern that significantly affects the quality of life for those who suffer from it because the lesions usually worsen over time and it is uncommon to discover a case that gets better on its own without treatment.⁵

The factors that cause vitiligo cannot be isolated from the rise in cases of the condition.

Vitiligo development has been connected to a number of causes, including genetics, stress, physical harm, autoimmune diseases, internal illnesses, biochemistry, viral infection, and melanocyte release mechanisms.¹ Phototherapy, topical and oral pharmaceutical therapy, and surgical treatments are all components of the conventional

Characteristics of Vitiligo Patients in Dermatology and Venereology Outpatient Clinic Unit at Bali Mandara General Hospital 2021-2022

treatment for vitiligo. The treatment aims to improve vitiligo lesions' repigmentation and stop the disease's progression.⁷ The aim of this study is to find out the incidence, characteristics, and clinical profile of patients of vitiligo patients during the last 2 years in the Division of Dermatovenereology Outpatient Clinic Bali Mandara Hospital from 2021 to 2022.

METHODS

The design study is a descriptive retrospective design. The data was performed by collecting the medical records of new vitiligo patients, including identity, history taking, examination, diagnosis, treatment, follow-up and counseling with cross-sectional approach. The selection of sample by total sampling methods was taken from attendance registers in the Division of Dermatovenereology Outpatient Clinic Bali Mandara General Hospital. The characteristics of vitiligo patients are assessed in this cross-sectional, quantitative descriptive study. The study started with the administration and tool preparation in the form of ethical feasibility studies and research permits. The primary variables in this study were characteristics from medical records, including age, gender, occupation, vitiligo type, year of examination, and kind of therapy. The SPSS program version 30 for Windows was then used to process and perform a descriptive analysis on the gathered data.

RESULT

The number of vitiligo new patient visits in the Outpatient Clinic Dermatovenereology Bali Mandara Hospital, over 2 years (2021 - 2022) was 198 patients. There are 109 patients (51.1%) were female, and 89 patients (44.9%) were male, according to the gender distribution with the most disease onset of 1-5 years (30.43%). According to the classification of vitiligo, the majority of patients, totaling 117 individuals (59.1%), were diagnosed with segmental vitiligo within the overall sample. While there were 39 patients (19.7%) who suffered from focal vitiligo, 30 (15.2%) patients who suffered from acrofacial vitiligo, 11 (5.6%) patients who suffered from generalized vitiligo and the remaining 1 (0.5%) patient was diagnosed as universal vitiligo. The vitiligo patients were mostly in the 1–20 years age group, which are 72 patients (36.4%) with the most occupation were students, which are 76 patients (38.4%). In this study, Data shows that the number of patients who did not have a family history of vitiligo was 125 (63.1%) higher than those who had a family history of vitiligo which is 73 patients (36.9%).

In terms of the therapy given, 170 patients (85.9%) only received excimer light phototherapy and 28 patients (14.1%) with a combined treatment history of topical and excimer light phototherapy with the most length of treatment for 1-5 years (64.1%).

Table 1. Characteristics of Vitiligo Patients at Bali Mandara General Hospital, Denpasar

Variable	Frequency (n)	Total (n=198)
	Frequency	Presentation
Gender		
Female	109	55.1%
Male	89	44.9%
Age (years)		
1-20	72	36.4
21-40	63	31.8
41-60	40	20.2
>60	23	11.6
Occupation		
Housewife	10	5.1
Student	76	38.4
Teacher	3	1.5
Self-employed	72	36.6
Government	6	3
Farmer	4	2
Health worker	2	1
retirement	10	5.1
Not yet working	15	7.6
Onset (years)		
<1	57	28.8
1-5	107	54
>5	34	17.2
Family history of vitiligo		

Characteristics of Vitiligo Patients in Dermatology and Venereology Outpatient Clinic Unit at Bali Mandara General Hospital 2021-2022

yes	73	36.9
no	125	63.1
Lesion type		
Segmental	39	19.1
Non Segmental	117	59.1
Generalisata	11	5.6
acrofacial	30	15.2
focal	1	0.5
Treatment		
Phototherapy	170	85.9
Topical +Phototherapy	28	14.1

DISCUSSION

This study found that the ratio of female (55,1%) patients was greater than male (44.9%) patients from 198 cases. A similar study by Wonkar, et al, which reported that female vitiligo patients (54,5%) visited more than male (45,5%).⁶ The incidence of vitiligo was also higher in females than in males at Dr. Soetomo Surabaya Hospital, with a percentage of 53.9% of the total 115 vitiligo cases.⁵ A research study by Rahmayanti et al. indicated that women comprised 68.1% of vitiligo cases receiving therapy, with a ratio of 2.1:1.6:8.⁸ This observation indicates that women are more attentive to alterations in skin pigmentation due to vitiligo, as it pertains to cosmetic and aesthetic concerns, resulting in a higher likelihood of seeking treatment and management than men.⁵ The age group with the highest number of vitiligo cases at Bali Mandara Hospital's Outpatient Clinic Dermatovenereology was 1–20 years old, comprising 72 patients (36.4%), followed by 21–40 years old, comprising 63 (31.8%) patients. The analogous study by Degboe and Gauthier indicated that a majority of vitiligo patients present before the age of 30 (70-80%) and before the age of 20 (50%).⁹ The age distribution among vitiligo patients aids in medication selection, particularly indicating that juvenile and elderly patients should exercise caution with topical corticosteroid therapy due to the danger of heightened drug absorption. The predominant occupations of vitiligo patients were students (38.4%) and self-employed individuals (36.6%). The Dwiwana study indicated that the predominant occupation among vitiligo patients was students, comprising 30.99% of the sample.¹⁰ The analogous study conducted by Saiboo et al. revealed that the predominant occupations of vitiligo patients were students (20%) and self-employed individuals (20%).⁵ The findings of the occupation in this study were less valuable because to the inability to examine factors that may have precipitated the start of vitiligo in patients.

The duration of lesion of patients with vitiligo in this study primarily ranges from 1 to 5 years (54%). The findings align with the research performed at Sitanala Hospital, indicating that the predominant duration of the condition was within the 1-5 year lesion duration category, which included 76 people

(61.78%), whereas the least prevalent duration exceeded 10 years, containing six people (4.87%).¹¹

Approximately one-third of individuals affected by vitiligo possess a familial history; however, there are limited epidemiological investigations to substantiate this claim.¹² In this study shows that vitiligo patients had family history of vitiligo disease (36.9%). Vitiligo had a polygenic or autosomal dominant inheritance pattern with incomplete penetrance and variable expression. The incidence of positive family history in vitiligo patients is 11–46%, as reported by different studies. This theory is supported by this study, which found that some vitiligo patients had multiple risk factors, necessitating a multifactorial analysis.¹³

Segmental vitiligo typically occurs in childhood, characterised by a fast and consistent advancement. It is not linked to autoimmune illness. Non-segmental vitiligo is defined by symmetrical depigmented macules and is often linked to autoimmune disorders due to the lesion's active characteristics. This study found that non-segmental vitiligo (59.1%) was more prevalent than segmental vitiligo (19.1%), with focal vitiligo being the least common kind (0.5%). This outcome pertains to the research conducted by Degboe and Saiboo indicating that the predominant lesion type was non-segmental vitiligo, succeeded by segmental vitiligo.^{5,9} This findings aligns with research by Hariyana, which indicates that the lowest prevalence of vitiligo is associated with the focused vitiligo type. Determining the type of vitiligo lesion in new patients is essential for devising future treatment strategies. Understanding the precise type of vitiligo lesion a patient possesses facilitates a dermatologist's ability to deliver specific guidance regarding the condition.¹¹

Excimer Light is a prevalent therapy utilised for vitiligo patients in this study (85.9%), in comparison with the combination therapy of topical corticosteroids and phototherapy. Excimer light can induce repigmentation, stabilisation, immunosuppression, and immunomodulation. Specific wavelengths can selectively affect keratinocytes, melanocytes, fibroblasts, lymphocytes, and cutaneous dendritic cells, inducing effects such as death, T cell depletion, antigen reduction, and modulation of mediator and cytokine processes. According to Nurhadi's research, vitiligo patients who received three weekly treatments with 308 nm

Characteristics of Vitiligo Patients in Dermatology and Venereology Outpatient Clinic Unit at Bali Mandara General Hospital 2021-2022

excimer light demonstrated a good therapeutic response, as evidenced by repigmentation at the borders of the lesions following the fifth excimer light therapy.¹⁴

CONCLUSION

The summary data of vitiligo cases at the Outpatient Clinic of Dermatovenereology Bali Mandara Hospital Denpasar from 2020 to 2021 indicated a reasonably stable prevalence, mostly affecting females within the active age group of 1-20 years, particularly students. The predominant lesion type was non-segmental vitiligo, succeeded by segmental vitiligo, whereas Excimer light phototherapy was the most commonly utilised treatment.

Declaration by Authors

Ethical Approval: This ethical clearance number for this study is 082/EA/ KEPK.RSBM.DISKES/2024 was granted by the Bali Mandara General Hospital Ethics Commission.

Author Contributions: Each author has contributed to the data collection, data analysis, assessment of the references, process of writing, and publication

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

- I. Bergqvist C, Ezzedine K. Vitiligo: a review. *Dermatology*. 2020;236(6):571-592.
- II. Boniface K, Seneschal J, Picardo M, Taïeb A. Vitiligo: focus on clinical aspects, immunopathogenesis, and therapy. *Clinical reviews in allergy & immunology*. 2018;54:52-67.
- III. Fitzpatrick Dermatology. 9th Ed. Vol. 1. United States: McGraw-Hill Education, 2019. Kedokteran.
- IV. Siddiqua A, Rahaman MM, Siddique MRU, Asma AN, Akter S. Vitiligo Cases in the Out-Patient Department in a Tertiary Care Hospital. *IAHS Medical Journal*. 2024;7(1):17-21.
- V. Saiboo AA, Prakoeswa CRS, Indramaya DM, Hidayati AN, Utomo B, Eliza F. Characteristics and Clinical Profile of Vitiligo Patients in Dermatology and Venereology Outpatient Clinic Unit at Dr. Soetomo General Academic Hospital Surabaya. *Berkala Ilmu Kesehatan Kulit dan Kelamin*. 2023;35(1):1-5.
- VI. Wongkar F, Winaya KK. Karakteristik pasien vitiligo di RSUP Prof. I GNG Ngoerah, Denpasar. *Intisari Sains Medis*. 2024;15(3):1025-1028.
- VII. Yonathan EL. Vitiligo: Update of Pathogenesis and Treatment. *Journal of Medicine and Health*. 2023;5(1):95-109.
- VIII. Rahmayanti ND. A Retrospective Study: The Profile of New Patient with Vitiligo. *Berkala Ilmu Kesehatan Kulit dan Kelamin*. 2016;28(2):130-136.
- IX. Dégboé B, Atadokpèdé F, Saka B, et al. Vitiligo on black skin: epidemiological and clinical aspects in dermatology, Cotonou (Benin). *International journal of dermatology*. 2017;56(1):92-96.
- X. Dwiyanara RF, Marindani V, Agustina R, Setiawan, Idjradinata PS, Sutedia E. Profil Kliniko-Epidemiologi pada Pasien Vitiligo di RSUP Dr. Hasan Sadikin Bandung. *MAJALAH KEDOKTERAN BANDUNG-MKB-BANDUNG MEDICAL JOURNAL*. 2017;49(2):132-138.
- XI. Hariana M, Komarasari E, Esti PK. Profil Pasien Vitiligo di Rumah Sakit Dr. Sitanala Januari 2020–Juni 2023. *Syntax Idea*. 2024;6(3).
- XII. Chakraborty AS, Agarwal R, Preethi P, Chandrashekar B. Clinico-Epidemiological Profile of Childhood Vitiligo. *Indian Dermatology Online Journal*. 2024;15(4):683-684.
- XIII. Leung AK, Lam JM, Leong KF, Hon KL. Vitiligo: an updated narrative review. *Current Pediatric Reviews*. 2021;17(2):76-91.
- XIV. Nurhadi S. Vitiligo Fokal pada Anak Yang Diterapi dengan Target Excimer Light 308 nm. 2019.