



A STUDY ON VARIOUS CLINICO - EPIDEMIOLOGICAL PATTERNS OF VITILIGO AMONG PATIENTS ATTENDING DERMATOLOGY OPD IN A TERTIARY CARE CENTRE, CHENNAI

Dermatology

Dr. J. Reena Catherine

MD,DVL Resident, A.C.S. Medical College And Hospital, Chennai

Dr. V. Sudha

Prof.& HOD, Dermatology Dept.,A.C.S. Medical College And Hospital, Chennai

Dr. P. Mohan*

Professor, Dermatology Dept., A.C.S. Medical College And Hospital, Chennai

*Corresponding Author

ABSTRACT

Background: Vitiligo is a common acquired disorder of depigmentation of the skin. Globally it affects 1%-2% of the world's population, irrespective of race or ethnicity, with the higher incidence of about 8.8% seen in Indian subcontinent. The development of visible skin lesions and their chronic progression may have a substantial negative impact on patients' quality of life also leads to psychiatric morbidity. The main aim of this study is to assess the various clinico- epidemiological patterns of vitiligo among patients attending Dermatology Department in a Tertiary Care Centre, Chennai. **Methodology:** This hospital based observational study is conducted among patients presenting with vitiligo in Dermatology OPD in the year January 2020 - December 2022 in ACS Medical College and Hospital, Chennai. A total of 73 patients are enrolled for this study. Demographic details like age, gender and diagnosis of vitiligo are collected by using semi-structured questionnaire. Data's collected are entered in Microsoft Excel and analysed in Epi Info software. The results are given in proportions. **Results:** Among the 73 study participants, majority of them are adults (78.1%) and around 21.9% are in paediatric age group, females are 52.1% and males are 47.9%. The diagnosis in our study shows majority of the patients had vitiligo vulgaris (69.9%) followed by focal vitiligo in 11% and segmental vitiligo in 8.2% of the patients.

KEYWORDS

Patterns Of Vitiligo, Depigmentation, Dermatology

INTRODUCTION

The skin which is the largest organ in the body protects the underlying structures by providing a covering. Diseases with a high prevalence (> 1%) in the general community, or at the primary or peripheral healthcare level, are referred to as common disorders. While some skin diseases are unsightly but not harmful, others may be contagious. [1] Vitiligo is a common, acquired disorder characterized by progressive depigmentation of the skin and the mucous membranes that result from the destruction of melanocytes in the interfollicular and/or intrafollicular region. The clinically characteristic symptoms of vitiligo are pale or milk-white macules or patches occurring on the skin in different parts of the body and sometimes also on the mucous membranes.[2]

The exact cause of vitiligo is unknown, but it is commonly regarded as a multifactorial disease with a complex pathogenesis that includes a number of postulations like autoimmune, cytotoxic, biochemical, oxidant-antioxidant, viral, and neural mechanisms for the destruction of the melanocyte function in genetically predisposed individuals.[3]

The study conducted by Shaji et al[4] stated that, on the basis of few dermatological outpatient records, the incidence of vitiligo in India is found to be 0.25%-2.5%. Studies have shown that there is 4.5 fold increase in prevalence and observed among close biological relatives of the affected individuals. It affects both genders of all ages with a peak incidence between 18 and 21 years. Vitiligo has been classified based on clinical grounds into two major forms, namely, segmental vitiligo (SV) and non-segmental vitiligo (NSV). Non-segmental vitiligo includes several variants such as generalized vitiligo, acrofacial vitiligo, universal vitiligo.[10] However in children, vitiligo shows a female preponderance, a higher proportion of segmental presentation than acro-facial and mucosal vitiligo, and association with other autoimmune or endocrine disorders being uncommon.[5]

Although the patient's life expectancy is unaffected, widespread prejudices, ignorance, stigmas, a lack of scientific evaluation, and the confusion of vitiligo with leprosy all contribute to the condition being a social embarrassment for the patient. There is a stigma associated with vitiligo, and the families of those affected, especially young females experience social rejection and considered unfit for marriage life. This study is proposed to study the various clinical patterns of vitiligo among general population mainly to assess the various epidemiological characteristics of vitiligo in order to understand this disease more clearly for early diagnosis and management.

OBJECTIVE

- To assess the various clinico- epidemiological patterns of vitiligo among patients attending Dermatology Department in a Tertiary Care Centre, Chennai.

MATERIALS AND METHODS

The study design is a Hospital- based Observational study, the study area is the Department of Dermatology, ACS Medical College and Hospital, Chennai, the study duration is from January 2020 to December 2022, the study population is patients presenting with vitiligo. The inclusion criteria is all new patients with vitiligo presenting to outpatient department and patients who have given consent for the study. The exclusion criteria is patients with a present or history of any major physical or dermatological illness other than vitiligo and immuno-compromised patients. The sampling technique is convenient sampling. The sample size is 73 study participants. The Data collection in this hospital based observational study conducted among patients presenting with vitiligo in Dermatology OPD in the year January 2020 - December 2022 in ACS Medical College and Hospital, Chennai. A total of 73 patients are enrolled for this study. After getting informed written consent from the patient, the demographic details like age, gender and a detailed history of onset, duration, progression and associated symptoms of vitiligo are collected by using semi-structured questionnaire. Data's collected are entered in Microsoft Excel and analysed in Epi Info software. The results are given in proportions.

RESULTS

73 patients who presented with vitiligo in Dermatology OPD during the months in 2020 - 2022 are included in the study and results are given below:

Tab.1: Distribution Of Study Participants

Category	No of Patients	%
Paediatric	16	21.9%
Adult	57	78.1%
Total	73	100%

In our study, majority of the patients are adults 78.1% and around 21.9% are in paediatric age group.

Tab.2: Gender Distribution As Per Pediatric And Adult Age Group

Category	Total Females	Total Males	Total Patients
Paediatric	5(31.3%)	11(68.7%)	16
Adult	33(57.9%)	24(42.1%)	57
Total	38(52.1%)	35(47.9%)	73

In the present study, 52.1% are females and 47.9% are males.

Tab.3: Age And Gender Wise Distribution Of Patients

Age Category		Gender		Total
		Female	Male	
1-5	n	0	1	1
	%	0.0%	100.0%	100.0%

6-10	n	5	4	9
	%	55.6%	44.4%	100.0%
11-14	n	6	0	6
	%	100.0%	0.0%	100.0%
14-18	n	1	2	3
	%	33.3%	66.7%	100.0%
19-30	n	16	9	25
	%	64.0%	36.0%	100.0%
31-40	n	2	8	10
	%	20.0%	80.0%	100.0%
41-50	n	4	3	7
	%	57.1%	42.9%	100.0%
51-60	n	2	2	4
	%	50.0%	50.0%	100.0%
61-70	n	1	1	2
	%	50.0%	50.0%	100.0%
71-80	n	1	4	5
	%	20.0%	80.0%	100.0%
80	n	0	1	1
	%	0.0%	100.0%	100.0%

The most affected age group in our study is 19-30 years with 25 out of 73 patients (34.2%) followed by 31-40 years with 10 patients (13.6%). The least affected population is 1-5 years and age above 80 years. The male preponderance is seen mostly in the age group of 19-30 years.

In paediatric age group, most affected population is 6-10 years followed by 11-14 years.

Tab.:4 : Month Wise Distribution From 2020 To 2022

		Year			Total
		2020	2021	2022	
January	n	6	5	1	12
	%	20.7%	29.4%	3.7%	16.4%
February	n	9	1	1	11
	%	31.0%	5.9%	3.7%	15.1%
March	n	6	3	1	10
	%	20.7%	17.6%	3.7%	13.7%
April	n	0	3	3	6
	%	0.0%	17.6%	11.1%	8.2%
May	n	0	0	2	2
	%	0.0%	0.0%	7.4%	2.7%
June	n	1	0	6	7
	%	3.4%	0.0%	22.2%	9.6%
July	n	0	1	5	6
	%	0.0%	5.9%	18.5%	8.2%
August	n	1	0	4	5
	%	3.4%	0.0%	14.8%	6.8%
September	n	0	1	2	3
	%	0.0%	5.9%	7.4%	4.1%
October	n	2	1	0	3
	%	6.9%	5.9%	0.0%	4.1%
November	n	3	1	0	4
	%	10.3%	5.9%	0.0%	5.5%
December	n	1	1	2	4
	%	3.4%	5.9%	7.4%	5.5%
Total	n	29	17	27	73
	%	39.7%	23.3%	36.98%	100.0%

Majority of patients (39.7%) have consulted the OP in the year 2020 (29 out of 73 patients). Majority of patients have attended during the months of January and February.

Tab.5: Month Wise Distribution From 2020 To 2022 Among Females

		Year			Total
		2020	2021	2022	
January	n	4	4	1	9
	%	30.8%	36.4%	7.1%	23.7%
February	n	5	1	1	7
	%	38.5%	9.1%	7.1%	18.4%
March	n	1	0	0	1
	%	7.7%	0.0%	0.0%	2.6%
April	n	0	2	2	4

	%	0.0%	18.2%	14.3%	10.5%
May	n	0	0	2	2
	%	0.0%	0.0%	14.3%	5.3%
June	n	0	0	2	2
	%	0.0%	0.0%	14.3%	5.3%
July	n	0	0	3	3
	%	0.0%	0.0%	21.4%	7.9%
August	n	0	0	2	2
	%	0.0%	0.0%	14.3%	5.3%
September	n	0	1	0	1
	%	0.0%	9.1%	0.0%	2.6%
October	n	2	1	0	3
	%	15.4%	9.1%	0.0%	7.9%
November	n	1	1	0	2
	%	7.7%	9.1%	0.0%	5.3%
December	n	0	1	1	2
	%	0.0%	9.1%	7.1%	5.3%
Total	N	13	11	14	38
	%	100.0%	100.0%	100.0%	100.0%

The month wise distribution of vitiligo among the female patients for each year is given above : in 2020 the incidence of vitiligo cases is higher in February month, in 2021 the incidence of vitiligo cases is higher in January month and in 2022 it is higher during the month of July.

Tab.6: Month Wise Distribution From 2020 To 2022 Among Males

		Year			Total
		2020	2021	2022	
January	n	2	1	0	3
	%	12.5%	16.7%	0.0%	8.6%
February	n	4	0	0	4
	%	25.0%	0.0%	0.0%	11.4%
March	n	5	3	1	9
	%	31.3%	50.0%	7.7%	25.7%
April	n	0	1	1	2
	%	0.0%	16.7%	7.7%	5.7%
May	n	0	0	0	0
	%	0.0%	0.0%	0.0%	0.0%
June	n	1	0	4	5
	%	6.3%	0.0%	30.8%	14.3%
July	n	0	1	2	3
	%	0.0%	16.7%	15.4%	8.6%
August	n	1	0	2	3
	%	6.3%	0.0%	15.4%	8.6%
September	n	0	0	2	2
	%	0.0%	0.0%	15.4%	5.7%
October	n	0	0	0	0
	%	0.0%	0.0%	0.0%	0.0%
November	n	2	0	0	2
	%	12.5%	0.0%	0.0%	5.7%
December	n	1	0	1	2
	%	6.3%	0.0%	7.7%	5.7%
Total	N	16	6	13	35
	%	100.0%	100.0%	100.0%	100.0%

The month wise distribution of vitiligo among the male patients for each year is given above : in 2020 and 2021 the incidence of vitiligo cases is higher in March month, and in 2022 it is higher during month of June.

Tab.7: Clinical Patterns

Clinical Patterns	No of Patients	Percent
Vitiligo Vulgaris	51	69.9%
Acrofacial Vitiligo	2	2.7%
Focal Vitiligo	8	11.0%
Lip Vitiligo	2	2.8%
Mucosal Vitiligo	2	2.7%
Vitiligo Universalis	2	2.7%
Segmental Vitiligo	6	8.2%
Total	73	100.0%

The clinical pattern in our study is as follows : vitiligo vulgaris in 69.9%, focal vitiligo in 11% and segmental vitiligo in 8.2% of the patients.

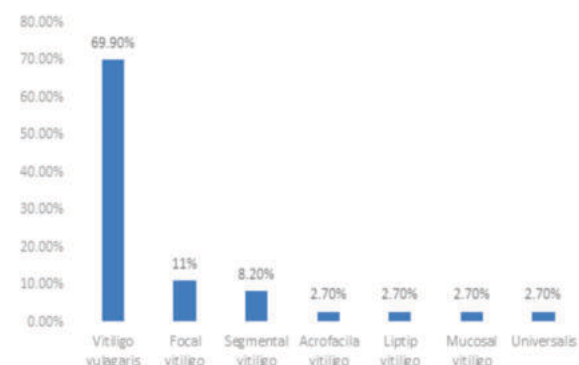


Fig. 1: Vitiligo Vulgaris



Fig.2a:Segmental Vitiligo

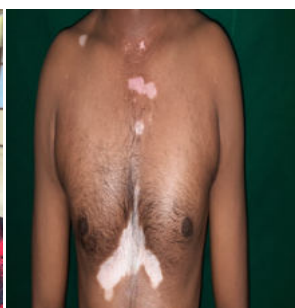


Fig.2b: Non segmental Vitiligo

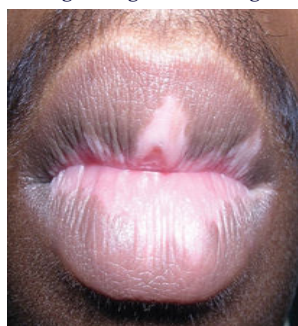


Fig.3a: Liptip Vitiligo Fig.3b.: Mucosal Vitiligo (Female genitalia)

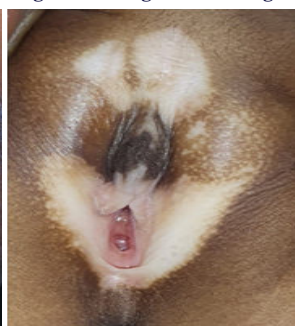


Fig.3c: Focal Vitiligo

The figures from 1- 3 show the different presentations of vitiligo in our study.

DISCUSSION

Vitiligo is a common skin condition associated with depigmentation of skin and the mucous membrane. From the present study, it is found that majority affected are adults (78.1%) and around 21.9% are in paediatric age group, females are 52.1% and males are 47.9%. The incidence is low below the age of 20 years and above the age of 80 years. This is similar to the study conducted by Varma et al[6] which also found that the mean age of vitiligo cases in their study was 24 years and the least affected population was 1-5 years and age above 80 years.

Another study conducted by Mahajan et al showed that the onset was between the ages of 40 and 60 years and the prevalence declined after 70 years of age which is similar to our study report.[7]

Howitz, J et al[8] conducted an epidemiological survey and found that the incidence was most often between the ages of 40 and 60 years and declined above 70 yrs of age which is also comparable to our study report.

The multi-centric study conducted by Sarma et al also found that the overall prevalence of vitiligo was 0.89%. Institutional prevalence of vitiligo in females was higher in most Indian states and overall was significantly higher (0.93%) than in males (0.86%) ($P < 0.001$). The reason is that social stigma and marital concerns prompt females to seek early consultation.[9]

In our study, majority of patients around 69.9% had vitiligo vulgaris followed by focal vitiligo in 11% and segmental vitiligo in 8.2% of the patients. This is similar to the study conducted by Varma et al which also stated that the most common type of vitiligo found was vitiligo vulgaris type and the most common site affected was lower limbs followed by upper limbs.

Our study is also in accordance with the study conducted by Shajil EM et al [4] which stated that vitiligo vulgaris is the commonest type of vitiligo seen. In the study conducted by Shah H et al also, the most common morphological pattern is vitiligo vulgaris (64.9%) followed by focal vitiligo (18.6%) which is in consistent with our study report.[10]

CONCLUSION

In our study, the observation is that vitiligo is common in 19- 30 years of age group, with higher incidence among females. A wide variety of clinical variations are noted in our study, vitiligo vulgaris being more predominant than other types. Along with early diagnosis and treatment, health education is essential among the public so that they come early for screening and also to avoid the stigma of vitiligo especially in females.

Limitations

- Small sample size and single centered study.
- The study can be done in large samples with different age groups and with wider applicability.

Conflict Of Interest : Nil

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