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Original Research Article

Prevalence of vitiligo at the tertiary health care centre, Mc Gann's teaching district hospital Shivamogga

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ABSTRACT

Background: Vitiligo is a common depigmentation disorder involving persons of all ages and both genders uniformly throughout the races. The highest incidence of vitiligo has been recorded in Indians from the Indian subcontinent, along with Mexicans and Japanese.
Methods: Patients visiting Dermatology OPD were recruited for the study at the tertiary health care centre, Mc Gann's teaching district hospital Shivamogga. Data regarding health-related status and other factors were collected between January to December 2017.
Results: Among the potential candidates, 8.6% of our study population was with the positive family history of vitiligo and 50.9% were females and 49.1% were males. Patients with age from 27-36 years were found to be affected mostly. The most common site of onset was the lower limbs (30%) followed by head and neck (25.4%) with the commonest pattern to be of acro-facial type.
Conclusions: This study suggests that local epidemiological behavior of vitiligo was not the same across different regions. Variations did exist and may possibly be due to certain clinico-epidemiological parameters of Shimoga viz., prevalence of associated diseases and its extent of involvement.

Keywords: Vitiligo, Acro-facial, Clinical epidemiology, Shivamoga

INTRODUCTION

Vitiligo is an acquired pigmentary disorder of the skin with a worldwide incidence of 0.1 to 2%.[1,2] The characteristic features are milky-white macules or patches owing to the selective impairment of melanocytes, which occurs over various sites on skin and mucous membrane. The pathogenesis of vitiligo is due to any one or combined effect of metabolic abnormalities, oxidative stress, generation of inflammatory mediators, cell detachment and autoimmune responses but the exact cause is still controversial. Epidemiological studies on vitiligo have been seldom reported from South India. Hence the aim is to study the prevalence of vitiligo patients visiting dermatology department at the tertiary health care center, Mc Gann teaching District hospital Shivamoga.

METHODS

A prospective study was conducted in Dermatology outpatient and inpatient department, District Mc Gann Teaching Hospital, SIMS, Shivamogga during January to December 2017. All patients with vitiligo were enrolled in the study. Patients were diagnosed by clinical examination. Results were tabulated and were analyzed.

Statistical analysis

The statistical analysis was carried out with Statistical Package for Social Science for Windows Ver.11.0.

RESULTS

Patients visiting Dermatology OPD were recruited for the study. Among them 116 patients with vitiligo were included for the study. Out of which 50.9% were females and 49.1% were males (Table 1). The male to female ratio was 1:1.04.

Table 1: Prevalence of vitiligo with respect to gender.

Male (%)	Female (%)
49.14	50.86

The majority of patients belongs to the age group of 27 to 36 years (22.4%) followed by 17-26 (21.6%), ≥16 (16.4%), 37-46 (15.5%), 47-56 (10.3%), 57-66 (9.5%) and ≤67 years (3.31%) (Table 2).

Table 2: Prevalence of vitiligo with respect to age.

Age groups	≥16	17-26	27-36	37-46	47-56	57-66	≤67
Male (%)	6.03	5.2	11.2	8.62	6.03	7.76	4.31
Female (%)	10.34	16.38	11.2	6.9	4.31	1.72	0
Total (%)	16.37	21.58	22.4	15.52	10.34	9.48	3.31

About 8.6% of patients had the positive family history (Table 3).

Table 3: Prevalence of family history of vitiligo with respect to gender.

Family history	Percentage (%)
Male	2.6
Female	6.03

In non-segmental (41.6%) type of vitiligo, acro-facial (18.7%) was the most common type, followed by mixed (7.7%), mucosal (7.6%), universal (4.2%) and vulgaris (3.4%). Segmental vitiligo was found in 20.3% of patients. In unclassified vitiligo (38.1%), the focal and mucosal type was found in 33% and 5.1% respectively (Table 4).

Table 4: Prevalence of vitiligo types with respect to gender.

Types		Male (%)	Female (%)	Total (%)
Non segmental	**Acrofacial**	12.7	6	18.7
	Vulgaris	1.7	1.7	3.4
	Mucosal	5.1	2.5	7.6
	Mixed	1.7	6	7.7
	Universal	3.4	0.8	4.2
Segmental		11	9.3	20.3
Unclassified	**Focal**	12.7	20.3	33
	Mucosal one site	3.4	1.7	5.1

Lesions were mostly seen on lower limbs (30%) followed by head and neck (25.4%), upper limbs (24%), trunk (10.6%) and oral and genital mucosa (10%) (Table 5).

Table 5: Prevalence of site of onset in vitiligo with respect to gender.

Site of onset	Male (%)	Female (%)	Total (%)
Lower limbs	14	16	30
Head and neck	10.7	14.7	25.4
Upper limbs	13.3	10.7	24
Trunk	5.3	5.3	10.6
Oral and genital mucosa	6.7	3.3	10

DISCUSSION

The prevalence of vitiligo is considered to be highest in India, varying from 0.46 and 8.8%.[3] The female to male ratio in our study was 1.04:1. Shajil et al showed that males and females were affected with almost equal frequency though Khaitan et al showed males were more commonly affected than females whereas Shah et al showed slightly higher prevalence in female population.[4-6] This may be due to different ethnic backgrounds of population residing in different geographic region with different environmental condition may contribute to the wide variation in prevalence of vitiligo in India.

In our study, mean age of onset was 4 years, consistent with the most reports from India and other countries. [6] A considerable number of patients with vitiligo were identified before 20 years of age followed by half of it before the age of 10 years which is agreeable with our study (data not shown).[7,8] This implies that the disease starts at a younger age.

Family history plays an important role in manifestation of vitiligo.[9] In our study, 8.63% of study population had positive family history of vitiligo, out of which females (6.03%) were more compared to males (2.6%). Familial occurrence has been reported to vary from 5 to 30% in different studies.[10,11]

Lower limbs was the most common involved site which is supported with other studies.[12,13] Other sites involved were head and neck (25.4%) followed by upper limbs (24%), trunk (10.6%), and oral and genital mucosa (10%).

Our study infers acro-facial type of vitiligo was the commonest pattern, followed by other patterns. Conversely in other studies, vitiligo vulgaris was the most common type followed by acrofacial, segmental, universal, and mucosal vitiligo.[11] This variation may be due to multifactorial causes (autoimmune disorder, oxidative stress imbalance, critical sun burn, exposure to some toxic chemicals, heredity or viral infection).

CONCLUSION

The data suggests that local epidemiological behavior of vitiligo need not be the same across different regions. Variations do exist and may be due to certain clinico-epidemiological parameters of Shimoga viz., prevalence of associated diseases and its extent of involvement.

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REFERENCES

1. Wolff K, Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ. Fitzpatrick"s Dermatology in General Medicine, 7th edn, Vol. I. Mac Graw Hill, USA; 2007: 616–621.
2. Hann SK, Nordlund JJ. Vitiligo: A Monograph on the Basic and Clinical Science. 1 st ed. Oxford, Blackwell Science Ltd, London; 2000: 1-386.
3. Handa S, Kaur I. Vitiligo: clinical findings in 1436 patients. J Dermatol. 1999;26:653-7.
4. Shajil EM, Deepali Agrawal, Krishna Vagadia, YS Marfatia, Rasheedunnisa Begum. Vitiligo: Clinical profiles in Vadodara, Gujarat. Indian J Dermatol. 2006;51:100–4.
5. Khaitan BK1, Kathuria S, Ramam M. A descriptive study to characterize segmental vitiligo. Indian J Dermatol Venereol Leprol. 2012;78:715-21.
6. Shah H, Mehta A, Astik B. Clinical and sociodemographic study of vitiligo. Indian J Dermatol Venereol Leprol. 2008;74:701.
7. Lerner AB. Vitiligo. J Invest Dermatol. 1959;32:285-310.
8. Howitz J, Brodthagen H, Schwartz M, Thomsen K. Prevalence of vitiligo. Epidemiological survey on the Isle of Bornholm, Denmark. Arch Dermatol. 1977;113:47-52.
9. Alkhateeb A1, Stetler GL, Old W, et al. Mapping of an autoimmunity susceptibility locus (AIS1) to chromosome 1p31.3-p32.2. Hum Mol Genet. 2002;11:661-7.
10. Naik AU. Vitiligo: Compilation of clinico-epidemiological features in patients attending tertiary care government hospital, Thane. Australasian Med J. 2010;3:826-32.
11. Shankar DS, Shashikala K, Madala R. Clinical patterns of vitiligo and its associated co morbidities: A prospective controlled cross-sectional study in South India. Indian Dermatol Online J. 2012;3:114–8.
12. Vora RV, Patel BB, Chaudhary AH, Mehta MJ, Pilani AP. A clinical study of vitiligo in a rural set up of Gujarat. 2014;39:143-6.
13. Agarwal S, Ojha A, Gupta S. Profile of vitiligo in kumaun region of uttarakhand, India. Indian J Dermatol. 2014;59:209.

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