

CLINICAL PROFILE OF CHILDHOOD VITILIGO AT A TERTIARY CARE CENTRE OF EASTERN INDIA

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**Abstract**

Background: Vitiligo is an autoimmune disorder characterised by well-defined hypopigmented or depigmented macules due to absence or decrease in melanocytes. **Materials and Methods:** 72 children under 14 years of age with clinically diagnosis of vitiligo were included in this study. The study was conducted in the dermatology outpatient department from January 2021 to December 2022. All the patients meeting the inclusion criteria were taken into the study. A predefined performa was used for recording all the findings. **Result:** There were 33 male and 39 female children in the study (male female ratio 1.2:1). Mean age of onset was 7.8 years. The most common age group affected was 5 to 9 years (51%). Vitiligo vulgaris was the most common clinical type (47.2%). Head and neck region was the most common site of onset of the disease (39%). The most common associated feature was Koebner's phenomenon Family history was present in only 2.7% cases. Majority of patients (52%) had multiple lesions (more than 5). Body surface area involvement was less than 5% in 92% of cases. **Conclusion:** Childhood vitiligo differs from adult onset vitiligo in having different clinico epidemiological profile. Vitiligo in children is associated with significant psychological trauma leading to emotional stress and poor quality of life. Knowledge about the various clinical patterns and proper counselling will help in correct diagnosis and proper management of childhood vitiligo.

INTRODUCTION

Vitiligo is a common acquired pigmentary disorder characterized by depigmented macules which results from selective destruction of pigment forming cells melanocytes.

The aetiology remains unknown; however, genetic, autoimmunity, autotoxicity and neural dysfunction theories leading to loss of melanocytes have been proposed.^[1]

The population prevalence is estimated to be 0.1% to 2% in different countries.^[2,3]

Vitiligo lesions on exposed parts of the body can lead to low self-esteem and poor quality of life. Vitiligo beginning in childhood may interfere with psychological development that may have long-lasting effects on the self-confidence of these children.^[4-6] Various preconceptions and social stigma about vitiligo are widespread in India. This paper is aimed at studying the clinical and demographic profile of patients under 14 years of age diagnosed with vitiligo in a dermatology opd of a tertiary care center of east India.

MATERIALS AND METHODS

This is a cross-sectional prospective descriptive study of all patients younger than 14 years who were diagnosed with vitiligo in the period March 2021 – February 2023. Ethical clearance was obtained from the Institutional Ethical Committee of the Institute. A total of 72 children up to age 14 years with vitiligo were included in the study. Written informed consent was obtained from all participants and from parents/guardians of children Childrens whom parents/guardians were not willing to give written consent and participate in the study were excluded. A predefined proforma was used for recording the findings. Demographic details of all patients including age, sex, duration, site of onset, severity, history of Koebner's phenomenon, mucosal involvement, family history and history of associated diseases was noted in a predefined performa.

RESULTS

Out of the 72 paediatric patients younger than 14 years with a diagnosis of vitiligo who attended Dermatology OPD during the study period, 33 patients (45.8%) were male and 39 patients (54.2%)

were female. Male female ratio was 1: 1.2. Most patients 37(51%) belong to 5-9 years of age with mean age of onset as 7.8 years. The mean duration of disease was 1.2 years with majority of patients (38%) having disease duration more than 1 year. The most common pattern of vitiligo was vitiligo vulgaris (n = 34, 47.2%) followed by focal (n = 24, 33.3%), segmental (n = 9, 12.5%), mucosal (n = 3, 4.2%), acro facial (n = 2, 2.8%) [Figure 1]. No child had universal vitiligo.

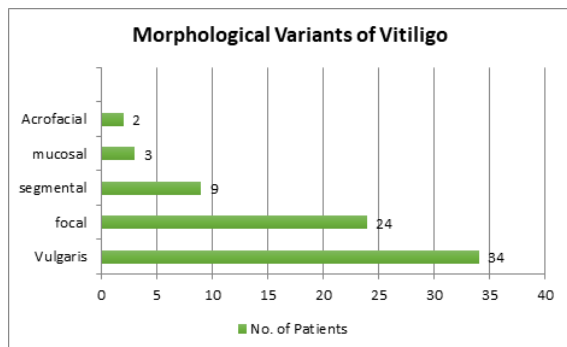


Figure 1: Morphological Variants of Vitiligo

Bilateral involvement is seen in 61% patients and unilateral involvement in 39% of patients. Most commonly involved initial site was head and neck seen in 28 (38.9%) patients, followed by lower limb 19 (26.3%), upper limbs 14(19.4%), trunk 8(11.1%), mucosal 3(4.1%). [Figure 2]. Oral mucosa was involved in 2(2.8)% and genital involvement was seen in 1 (1.4)% of study population.

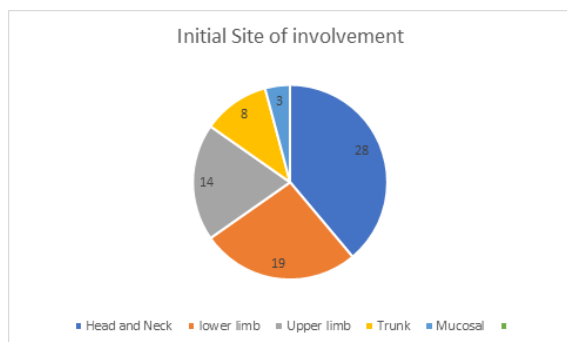


Figure 2: Initial Site of Involvement

66 (91.6%) children had body surface area involvement of less than 2%, 7(9.7%) had body surface area involvement of 2% to 5%, and 1(1.4%) had more than 5% body surface area involvement. [Figure 3]

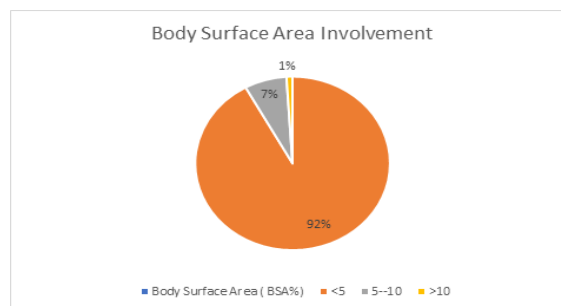


Figure 3: Body surface area involvement

Vitiligo affecting first and second-degree relatives was reported by 2 (2.7%) patients. Most common associated abnormalities included Koebner's phenomenon in 19 (26.4%), leukotrichia in 8 (11.1%), atopic dermatitis in 5(6.9%) alopecia areata in 3(4.2%), halo nevus in 2 (2.7%), and antithyroid antibody in 1 (1.4%) patient.

DISCUSSION

Vitiligo is an acquired chronic multifactorial disorder characterized by chalky or milky white macules of variable shapes due to loss of melanocytes. White patches of vitiligo are cosmetically unacceptable and usually cause emotional stress in children and adults. Vitiligo beginning in childhood can be associated with significant psychological morbidity that may have long-lasting effects on the self-respect of these children. The effect on children may vary depending on the location and severity of disease, individual capacities, and family perception about the disease.^[7] Vitiligo affects people in all geographic area. It affects 0.5% to 2.0% of the world's population, with half of the cases beginning in childhood.^[5,8,9] Most of the patients (n=37, 51.3%) in our study belonged to the age group of 5-9 years, the mean age of onset was 7.8 years. The finding was similar to study by Agarwal et al and Al Jabbri et al who reported mean age of onset as 6.9 years and 7.9 years respectively.^[5,6]

In our study, 33 patients (45.8%) were male and 39 patients (54.2%) were female. Agarwal et also observed similar finding of higher incidence in female (56.7%) and opined that this could be due to parents seeking early treatment and hospital visit for these cosmetically disfiguring patches in girls as cosmetic appearance and related social and martial problems are more among girls.^[5] Similar findings of higher incidence of childhood vitiligo in females have also been reported by Kambil et al (55%),^[10] and Jaisankar et al.^[11] A study from China has also reported almost equal incidence in boys and girls.^[12] The most common pattern of vitiligo was vitiligo vulgaris in 34 (47.2%) patients, followed by focal in 24 (33.3%), segmental in 9 (12.5%), mucosal in 3 (4.2%), acro facial in 2 (2.8%). Vitiligo vulgaris was also the most common type reported by other studies.^[6,10,11] In contrast to this, in a study conducted in Uttarakhand, most common reported type was

acrofacial.^[5] Focal vitiligo was second most common finding in our study. Focal vitiligo was also the second most common presentation in a study by Halder et al.^[13] Segmental vitiligo is also common in childhood as most cases of segmental vitiligo usually start in childhood or adolescent period. In a study by Jaisankar et al, segmental vitiligo has been reported as the second most frequent presentation, occurring in 21% of patients, followed by focal vitiligo in 20.1%.^[11]

Most commonly involved initial site of onset was head and neck seen in 28 patients (38.8%), followed by lower limb 19 (26.4%), upper limbs 14(33.3%) and trunk 8(11.1%). Mucosal involvement was in 3(4.2%) of cases. Similar findings have been reported in other studies as face or head and neck being the most common involved in childhood vitiligo.^[1,6] In contrast to this, other studies have also reported lower limb or extremities as initial site of involvement.^[5,10] Vitiligo affecting first and second-degree relatives was reported by 2 (2.7%) patients. This was lower than most studies which have reported family history from 3.3% to 12.5%.^[1,14] The lower percentage of family history may be due to tendency of patient to hide the disease due to associated stigma prevalent in our society.

Most common associated abnormalities observed in our patient was Koebner's phenomenon in 19 (26.4%) cases. Puri et al has reported similar findings in study done by them where Koebner's phenomenon was positive in 20% of cases [15]. Leukotrichia was present in 8 (11.1%) cases. Presence of leukotrichia reported in different studies varies widely in different studies and ranged from 3.7% to 32.5%. [5,7]. Other findings in our patients included atopic dermatitis in 5(6.9%) alopecia areata in 3(4.2%), halo nevus in 2 (2.7%), and antithyroid antibody in 1(1.4%) patient. Though not significant in our study, there has been reports on autoimmunity, antithyroid antibodies and thyroid dysfunction in children and adolescents with vitiligo[16,17]. Certain syndromes have also been described to occur in association with childhood vitiligo namely Vogt-Koyanagi-Harada disease and Alezzandrini syndrome with ocular finding [18].

CONCLUSION

We observed that vitiligo can start at early age of 1 month and is more prevalent in age group 5-9 years. Vitiligo vulgaris is the most common clinical variant and head and neck region are the most frequently affected site in children. Majority of patients have limited lesions involving less than 5% of their body

surface area. Other epidemiological features were similar to those reported in previous studies.

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