

## Assessment of Clinical Profile of Childhood Vitiligo Patients in a Known Population at a Tertiary Care Centre: An Observational Study

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### ABSTRACT

**Background:** Childhood vitiligo differs from the adults by showing a higher incidence in females, segmental vitiligo being more common and less frequent association with other systemic autoimmune and endocrine disorders. Hence; present study was planned to assess the clinical profile of childhood vitiligo patients.

**Materials & Methods:** Present study was planned to assess clinical profile of the childhood vitiligo patients in a known population. A total of 50 subjects were included in the present study. Clinical profile, pattern of distribution, demographic details and all the disease related clinical parameters were evaluated in the present study. Complete and through clinical examination of all the subjects was done. All the results were evaluated by SPSS software.

**Results:** In forty four percent of the patients, the childhood vitiligo occurred in limbs. In thirty percent of the patients, childhood vitiligo occurred in the head and neck region. In fifty six percent of the patients, vitiligo vulgaris and segmental type of vitiligo occurred.

**Conclusion:** Vitiligo vulgaris is the most common type of childhood vitiligo in the present population.

**KEYWORDS:** Childhood, Clinical Profile, Vitiligo.

### INTRODUCTION

Vitiligo is defined as an acquired cutaneous achromia characterized by milky white cutaneous macules of various sizes and shapes that tends to enlarge peripherally in course of time.<sup>1</sup> Childhood vitiligo differs from the adults by showing a higher incidence in females, segmental vitiligo being more common and less frequent association with other systemic autoimmune and endocrine disorders.<sup>2,3</sup>

Topical steroids low, mid, or high potency are often the first line of treatment because they are easy and convenient mode of treatment used since many decades. The pathogenesis of vitiligo is still unclear. It has been attributed to autoimmune, genetic, and neuromediated aberrations, and so on. Childhood vitiligo may have a tremendous impact on the psychological development of children.<sup>4-7</sup>

Hence; present study was planned to assess the clinical profile of childhood vitiligo patients.

### MATERIALS & METHODS

Present study was conducted in the department of paediatrics of the medical institute and it included assessment of clinical profile of the childhood vitiligo patients in a known population. Ethical approval from institutional ethical committee was obtained and also written consent after explaining in detail the entire research protocol were taken. All the patients that were diagnosed with clinical vitiligo were included.

### Inclusion Criteria

- Patients with less than 13 years of age,
- Patients with negative history of any other systemic illness,
- Patients with negative history of any other dermatological pathology,
- Patients with any known drug allergy

A total of 50 subjects were included in the present study. Clinical profile, pattern of distribution, demographic

details and all the disease related clinical parameters were evaluated in the present study. Complete and through clinical examination of all the subjects was done. All the results were evaluated by SPSS software. Univariate regression curve were used for the assessment of level of significance.

**Table 1: Age distribution of subjects**

Age group (years)	n	%
Less than 5	15	30
5- 10	28	56
More than 10	7	14
Total	50	100

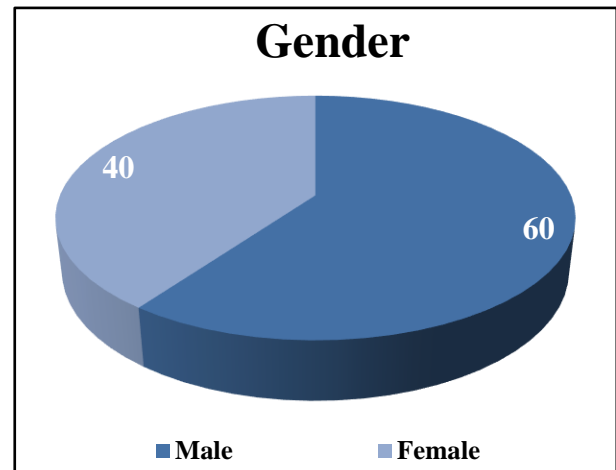
**Table 2: Distribution of subjects based on the site of onset in childhood vitiligo**

Site of onset	n	%
Lower limb	12	24
Upper limb	10	20
Head and neck	15	30
Trunk	8	16
Genitalia	5	10
Total	50	100

**Table 3: Distribution of subjects according to pattern of vitiligo**

Pattern of Vitiligo	n	%
Focal	10	20
Segmental	12	24
Vitiligo vulgaris	18	36
Mucosal	5	10
Mixed	3	6
Others	2	4
Total	50	100

**Graph 1: Gender wise distribution of subjects**

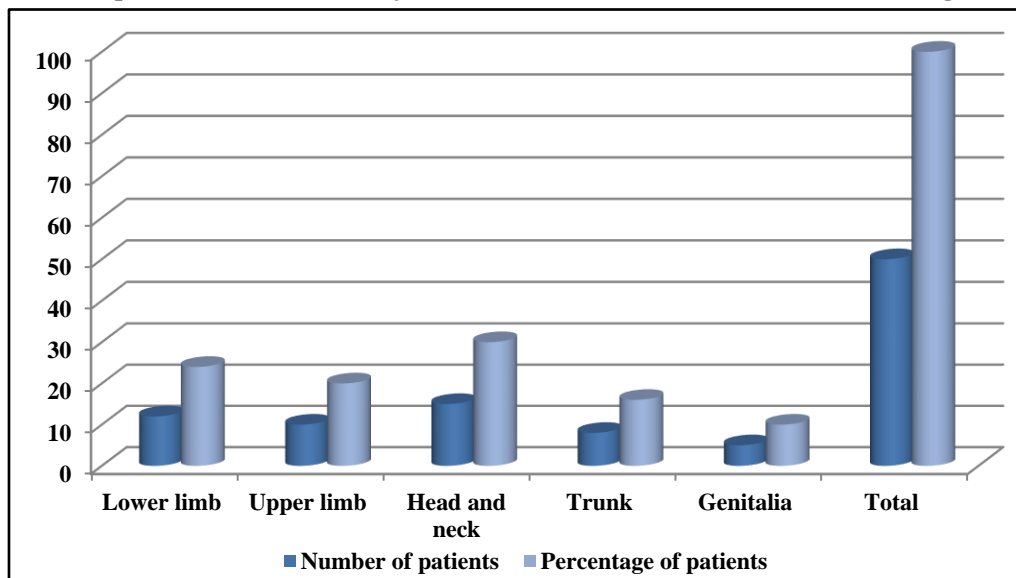


**RESULTS**

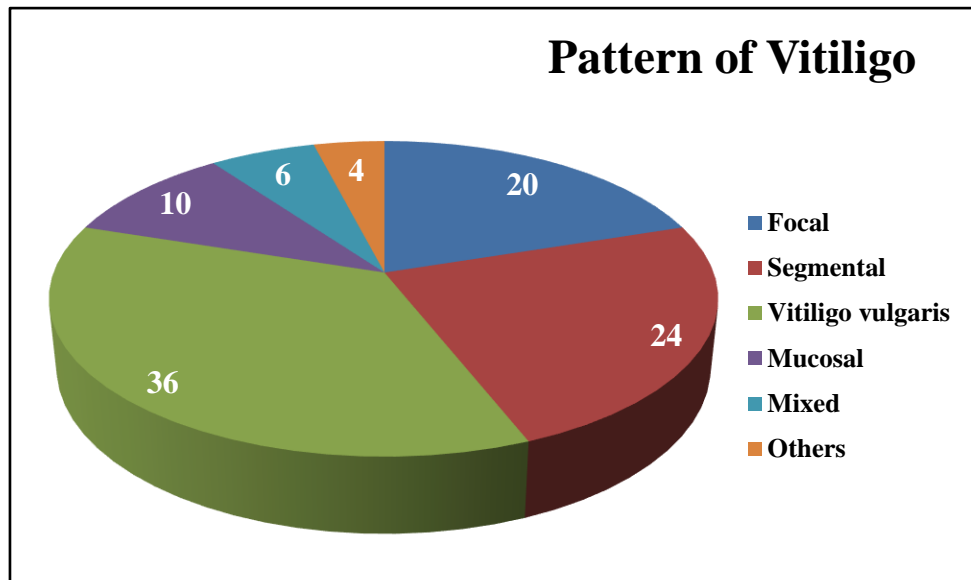
In the present study, majority of the subjects belonged to the age group of five to ten years. Majority of the subjects of the present study were males. In forty four percent of the patients, the childhood vitiligo occurred in

limbs. In thirty percent of the patients, childhood vitiligo occurred in the head and neck region. In fifty six percent of the patients, vitiligo vulgaris and segmental type of vitiligo occurred.

**Graph 2: Distribution of subjects based on the site of onset in childhood vitiligo**



**Graph 3: Distribution of subjects according to pattern of vitiligo**



### DISCUSSION

In the present study, in fifty six percent of the patients, vitiligo vulgaris and segmental type of vitiligo occurred. van Geel N et al evaluated the clinical significance of associated autoimmune/ autoinflammatory diseases in generalized vitiligo patients with respect to some general clinical variables, distribution pattern, disease activity and treatment response. Seven hundred generalized vitiligo patients were included in this retrospective observational cohort study. Associated autoimmune/ autoinflammatory diseases were present in 15.4% of the patient population and were more common in women compared with men, especially concerning thyroid disease. Only vitiligo patients with thyroid disease had clear different clinical characteristics. The percentage of total body surface area involvement was significantly ( $P = 0.005$ ) higher in the presence of thyroid disease which was more pronounced in women compared with men. Patients with thyroid disease had a particular predisposition to acral and joint depigmentations. No clear differences in disease activity or response to therapy were observed in vitiligo patients with or without autoimmune/autoinflammatory disorders. The presence of associated autoimmune/autoinflammatory diseases seems to influence the clinical profile of generalized vitiligo patients.<sup>8</sup>

Handa S et al studied the clinical and epidemiologic profile of childhood vitiligo, they retrospectively analyzed the data of children with vitiligo attending the pigmentary clinic of our center. Of the 625 children seen over 10 years, 357 (57.1%) were girls and 268 (42.9%) were boys. As compared to adult patients with vitiligo, this sex difference was found to be statistically significant ( $p < 0.001$ ). The mean age of onset of the disease was 6.2 years. Vitiligo vulgaris (generalized vitiligo) was the most common type, followed by focal, segmental, acrofacial, mucosal, and universal, in that

order. The most frequent site of onset was the head and neck, followed by the lower limbs, trunk, upper limbs, and mucosae. Leukotrichia was present in 77 patients (12.3%), while Koebner phenomenon was observed in 71 patients (11.3%). Halo nevi were observed in 29 patients (4.4%). Seventy-six patients (12.2%) had a family history of vitiligo. Eight patients (1.3%) had an associated autoimmune disease. These associated disorders were alopecia areata in two patients, and diabetes mellitus, thyroid disease, Addison disease, polyglandular syndrome, and pemphigus vulgaris in one patient each.<sup>9</sup> Speeckaert R et al investigated whether the distribution pattern of vitiligo is dependent on the clinical characteristics. A total of 700 generalized vitiligo patients were included in this retrospective observational cohort study. The most important predilection areas were the face (87%), followed by acral areas (76.3%) and extremities (59.7%). In women, joints ( $P = 0.002$ ) (especially elbows), hips ( $P < 0.001$ ), trunk ( $P < 0.001$ ) and body folds ( $P < 0.001$ ) (especially axillas) were more frequently affected compared to men. In contrast, in men more depigmentations in the beard area and genital area were observed ( $P < 0.001$ ). Vitiligo at a young age is more prone to be localized at the lower extremities whereas the upper extremities are more susceptible at an older age. In the face, the periocular area is linked to a younger age, in contrast to the perioral area. Acral areas were more frequently affected in patients with autoimmune disorders (in particular thyroid disease) ( $P = 0.001$ ). These results pointed to important differences in the distribution pattern according to the clinical characteristics. Although in some of these areas Koebner's phenomenon probably plays a role, other differences may represent a specific characteristic vulnerability related to the age, gender or typical association with autoimmune disease.<sup>10</sup>

Narita T et al assessed the generalized vitiligo and associated autoimmune diseases in Japanese patients and their families. One hundred and thirty-three Japanese patients with generalized vitiligo were enrolled in this study to investigate the occurrence of autoimmune diseases in Japanese patients with generalized vitiligo and their families. Twenty-seven of the patients with generalized vitiligo (20.3%) had autoimmune diseases, particularly autoimmune thyroid disease (sixteen patients, 12%) and alopecia areata (seven patients, 5.3%). Thirty-five patients (26.3%) had a family history of generalized vitiligo and/or other autoimmune diseases. Familial generalized vitiligo was present in fifteen (11.3%), including four families with members affected by autoimmune disorders. Twenty (15.0%) had one or more family members with only autoimmune disorders. Among Japanese vitiligo patients, there is a subgroup with strong evidence of genetically determined susceptibility to not only vitiligo, but also to autoimmune thyroid disease and other autoimmune disorders.<sup>11</sup>

## CONCLUSION

From the above results, it can be concluded that vitiligo vulgaris is the most common type of childhood vitiligo in the present population. However; future epidemiological studies are directed for better understanding the clinical understanding of the clinical spectrum of the disease.

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