



Original Research Article

Childhood Vitiligo: A hospital based retrospective study in Coastal South India

Bansari Davda^{1,*}, V Sivasubramanian¹¹Dept. of Dermatology, Vinayaka Missions Medical College and Hospital, Karaikal, 609609, Puducherry, India

ARTICLE INFO

Article history:

Received 24-08-2020

Accepted 02-09-2020

Available online 03-10-2020

Keywords:

Vitiligo
Children
Vulgaris
Segmental
Focal

ABSTRACT

Background: Vitiligo is an acquired, multifactorial disorder of depigmentation and is overwhelming and distressing to the patients and the care givers. Childhood vitiligo has different characteristics as compared to adult-onset vitiligo. Every parent wants to know if the disease will progress or regress.

Aims and Objectives: To study the epidemiological, clinical and hematological patterns of children with vitiligo.

Materials and Methods: First 50 patients with vitiligo, younger than 12 years of age, who visited the Dermatology outpatient department of Vinayaka Missions Hospital, a tertiary care center in Karaikal, between January 2015 and January 2020 were included. They were assessed for the natural history, clinical features, family history and associated abnormalities of vitiligo.

Results: There were 19 boys and 31 girls (boys: girls 1:1.63) out of 50 patients. Mean age of onset of vitiligo was 5.8 years and mean duration was 1.4 years. The most common site was the head and the neck, followed by the extremities, trunk and genitalia and the most prevalent type was vitiligo vulgaris (60%). Then, it was acrofacial vitiligo (26.5%), focal vitiligo (23.7%) and segmental vitiligo (2.6%). 5 patients had a positive family history. Involvement of mucosa in 12%, Leukotrichia in 11% and Koebnerization was seen in 10% children. Body involvement is bilateral in 72% and unilateral in 28% children. Majority of patients (49%) had multiple lesions (more than 5) and most (96%) had <5% body surface area involved.

Conclusion: In children, any depigmented/hypopigmented lesion should be evaluated and followed up properly to rule out vitiligo. The patterns and characteristics of childhood-onset vitiligo should be understood properly by Dermatologists as it presents in a different manner from adult-onset disease and its management should take several factors into consideration like extension, psychological effects on children and parents, avoidance of treatment side effects and probable association with other autoimmune diseases.

© 2020 Published by Innovative Publication. This is an open access article under the CC BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>)

1. Introduction

Vitiligo is a chronic, acquired, multifactorial disorder of depigmentation of skin, characterized by well-defined white macules or large macules due to loss of functional melanocytes and melanin from the epidermis. Childhood-onset vitiligo has distinguishable epidemiological and clinical features as compared to adult-onset vitiligo. It starts before 20 years of age (before 10 years in 25% cases). A female prevalence, segmental presentation is common and association with other endocrine or autoimmune disorders

is rare.

Vitiligo is a psychologically distressing disorder for the children as well as the care givers. Social stigmas, preconceptions, unawareness, prohibitions, and confusion about vitiligo are widespread in India. Hence, this study was undertaken to record various patterns of childhood vitiligo in Coastal South India.

2. Materials and Methods

2.1. Study type

Retrospective study

* Corresponding author.

E-mail address: bdavda74@gmail.com (B. Davda).

2.2. Study period

January 2015 to January 2020

2.3. Study sample

Children attending Dermatology outpatient department

2.4. Study place

Dermatology outpatient department at the Vinayaka Missions Hospital, Karaikal, Puducherry

2.5. Ethical considerations

Approval from Institutional Ethical Committee of Vinayaka Missions Research foundation, Karaikal was obtained, before starting the clinical study. Written informed consent was obtained in local vernacular language from every patient before enrollment.

2.6. Inclusion criteria

1. Children with diagnosis of vitiligo.
2. Participants less than 12 years old.
3. Participants who had given written informed consent.

2.7. Methodology

Demographic details of all patients like the age of onset, initial site involved, duration of disease, associated mucosal involvement and diseases and family history were obtained from the clinical notes.

3. Results

There were 19 (38%) boys and 31 (62%) girls out of the total 50 children with vitiligo. So, a female predominance is observed.

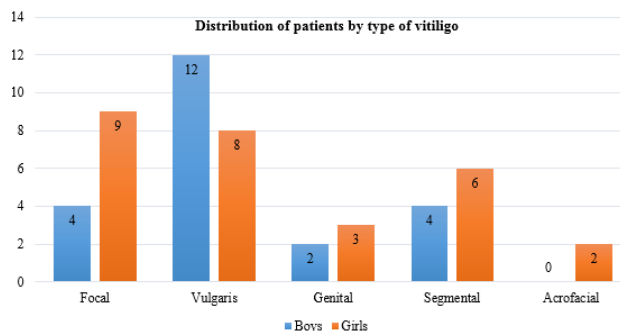
The mean age of onset of vitiligo was 5.8 years and the mean duration of disease was 1.4 years with majority of patients (44%) having more than 1-year duration.

Age (in Years)	Number of patients(n=50)	Prevalence %
0-1	06	12%
2-5	16	32%
6-12	28	56%

Duration (in months)	Number of patients (n=50)	Prevalence %
<6	16	32%
6-12	12	24%
>12	22	44%

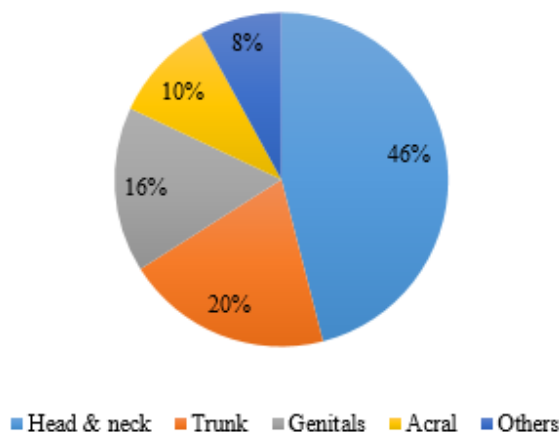
The most prevalent type of vitiligo seen in our patients was vitiligo vulgaris (40%), followed by focal (26%),

segmental (20%), genital (10%) and acrofacial (4%). Vulgaris was more common in boys (63.1%) and focal type in girls (29.03%).



The most common site of onset was the head and the neck area (46%), followed by trunk (20%), genitalia (16%) and acral (10%).

Distribution of patients by site of onset



Vitiligo family history was present in 5 (10%) patients. Thyroid disorder family history was present in 2 patients (4%) and Alopecia areata family history in 1 patient (2%).

Family History	Frequency %
Vitiligo in 1o relative	4%
Vitiligo in 2o relative	6%
Thyroid in 1o relative	2%
Thyroid in 2o relative	2%
Alopecia Areata	2%

Bilateral involvement is seen in 72% patients and unilateral involvement in 28% of patients.

Involvement of mucosa, leukotrichia and koebnerization were seen in 12%, 11% and 10% patients, respectively.

Laterality	Prevalence %
Unilateral	28%
Bilateral	72%
Mucosal Involvement	12%
Leukotrichia	11%
Koebnerization	10%

Distribution of patients by clinical examination findings. Majority of the patients (49%) were having multiple lesions (more than 5).

Most (96%) had only less than 5% body surface area involved.

Distribution of patients by clinical examination findings.

Number of Lesions	Prevalence %
Single	23%
1-5	28%
>5	49%
Body Surface Area (BSA)%	%
<5	96%
5-20	3.5%
>20	0.5%

4. Discussion

Vitiligo is an acquired, chronic, multifactorial disorder of depigmentation of skin characterized by well-defined white macules and large macules due to loss of functional melanocytes and melanin from the epidermis.

Female predominance is seen in the present study (62% vs. 38%), similar to the results in studies done by Jaisankar et al and Al-Jabari et al.^{1,2} Studies with male predominance were not found among children in contrast to that among adults (Shankar et al. [51.25%], Alzolibani et al. [52.63%], Singh et al. [56%] and Kar [51.6%]).³⁻⁶ So, there is more concern amongst parents in India when a girl is developing depigmented lesion than a boy as cosmetic appearance and related social and marital problems are more among girls in Indian structure.

Most of our patients (56%) were in 6-12 years of age group like in the study by Sheth et al. and Mu et al.^{7,8} and the mean age was (5.8 years) as compared to other studies by Al-Jabari et al. (7.9 years), Agarwal et al. (6.9 years), and Sheth et al (8.92 years).^{2,7,9} In this study, head-and-neck region was the most common site of onset with 23 patients (46%), much higher than the finding (25.71%) by Jain et al.¹⁰ Despite that, trauma prone sites like the lower limbs, hands and face may develop vitiligo lesions more easily in genetically susceptible individuals. The most prevalent type of vitiligo in boys in our study was vulgaris (63.1%) and in girls was focal (29.03%). The reason behind this finding could be a bigger worry in parents seeing even a single white

patch in girls than in boys, making them consult the doctors early.

Family history findings of vitiligo in our study (first-degree relatives-affected in 4% patients, second degree in 6%) were similar to the Indian studies by Handa and Dogra (12%) and Jain et al. (17.5%) but much lesser than in the study by Nicolaidou et al. (35%).¹⁰⁻¹²

In this study, 28% patients had unilateral vitiligo and the rest had bilateral involvement. Involvement of mucosa was seen in 12% of patients, like in the study by Sheth et al. (18%) and genitalia were more affected (11%) than lips (6%).⁷

In a North Indian study, 8 out of 625 children (1.3%) had an associated autoimmune disease like alopecia areata, thyroid disease, diabetes mellitus, pemphigus vulgaris or Addison's disease.¹² In our study, 1 out of 50 children (2%) had associated autoimmune disease like alopecia areata similar to study findings in Halder et al. study (2.4%).

5. Conclusion

As observed in our study, vitiligo can start at 2 months of age in children and is more prevalent in the age group of 6–12 years (56%). Thus, any depigmented patch in babies and children should be investigated carefully and followed-up regularly. Regional studies will help the clinicians practicing in these areas to be acquainted with its clinical and epidemiological patterns and be prepared for the management.

6. Limitations

The design of this study does not establish causal relationship. Sample size is small. Prospective studies with a larger sample size are required for this.

7. Source of Funding

None.

8. Conflict of Interest

None.

References

- Jaisankar TJ, Baruah MC, Garg BR. Vitiligo in children. *Int J Dermatol.* 1992;31(9):621–3.
- Al-Jabri MM, Al-Raddadi A. Childhood vitiligo: A retrospective hospital based study, Jeddah, Saudi Arabia. *J Saudi Soc Dermatol Dermatol Surg.* 2011;15(1):15–7.
- Shankar DSK, Madala R, Shashikala K. Clinical patterns of vitiligo and its associated co morbidities: A prospective controlled cross-sectional study in South India. *Indian Dermatol Online J.* 2012;3(2):114–8.
- Alzolibani AA, Robaee AA, Al-Shobaili H, Al-Saif F, Al-Mekhadab E, Settin AA, et al. Association of CYP2C9 Genetic Variants with Vitiligo. *Ann Dermatol.* 2014;26(3):343–8.
- Singh S, Usha, Pandey SS. Role of autoimmunity in vitiligo. *Indian J Allergy Asthma Immunol.* 2009;23:67–71.

6. Kar PK. Vitiligo: A study of 120 cases. *Indian J Dermatol Venereol Leprol.* 2001;67:302–4.
7. Sheth PK, Sacchidanand S, Asha GS. Clinico-epidemiological profile of childhood vitiligo. *Indian J Paediatr Dermatol.* 2015;16(1):23–8.
8. Mu EW, Cohen BE, Orlow SJ. Early-onset childhood vitiligo is associated with a more extensive and progressive course. *J Am Acad Dermatol.* 2015;73(3):467–70.
9. Agarwal S, Gupta S, Ojha A, Sinha R. Childhood Vitiligo: Clinicoepidemiologic Profile of 268 Children from the Kumaun Region of Uttarakhand, India. *Pediatr Dermatol.* 2013;30(3):348–53.
10. Jain SK, Kalwaniya S, Kumar R, Mehta P, Banjara N, Jain M, et al. Clinical profile of childhood vitiligo patients in Hadoti region in Rajasthan. *Indian J Paediatr Dermatol.* 2014;15(1):20–3.
11. Nicolaidou E, Antoniou C, Miniati A, Lagogianni E, Matekovits A, Stratigos A, et al. Childhood- and later-onset vitiligo have diverse epidemiologic and clinical characteristics. *J Am Acad Dermatol.* 2012;66(6):954–8.
12. Handa S, Dogra S. Epidemiology of Childhood Vitiligo: A Study of 625 Patients from North India. *Pediatr Dermatol.* 2003;20(3):207–10.

Author biography

Bansari Davda Post Graduate

V Sivasubramanian Professor and HOD

Cite this article: Davda B, Sivasubramanian V. **Childhood Vitiligo: A hospital based retrospective study in Coastal South India.** *IP Indian J Clin Exp Dermatol* 2020;6(3):227-230.