



A CLINICO - EPIDEMIOLOGICAL STUDY OF PEDIATRIC ACQUIRED FACIAL HYPOPIGMENTATION

DERMATOLOGY

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ABSTRACT

Background: Pigmentary disorders are believed to be the commonest group of dermatoses in Pediatric age group. Loss of pigment can have a profound psychological impact on the parents of the affected child.

Aim:

1. To determine the prevalence and proportion of acquired hypopigmented skin lesions on the face.
2. To evaluate their etiology and clinical characteristics among the patients of pediatric age group (< 12 years of age - facial lesions were found in 100 patients out of the 250 pediatric cases) visiting Department of Dermatology out - patient clinics of Shadan Institute of Medical Sciences, Teaching Hospital and Research Centre.

Results: Hypopigmented lesions are most commonly seen at 4-6 yrs. of age (4.4%) with the onset below 1yr of age duration (1%) with male preponderance (8.2%). The most common symptom was asymptomatic in 40 cases (4%), followed by itching seen in 23 cases (2.3%), photosensitivity in 17 patients (1.7%), redness in 16 cases (1.6%), and loss of sensations in 4 cases (0.4%). In this study the most common disorder was pityriasis alba in 20 cases (2.0%), followed by post inflammatory hypopigmentation in 12 cases with Seborrheic Dermatitis (SD) (1.2 %) Atopic Dermatitis (AD) as 8 patients (0.8%), nutritional cause in 8 patients (0.8%), focal vitiligo 8 patients (0.8%) ACD (Allergic Contact Dermatitis) as 7 patients (0.7%), Tinea Faciei 7 cases (0.7%), pityriasis versicolor in 6 (0.6%) cases, post infectious as after bacterial are 6 patients (0.6%), viral (0.6%), trauma after nail scratching as 4 patients (0.4%), Hansen's disease in 3 cases (0.3%) with indeterminate type 2 cases (0.2%), segmental 1 patient (0.1%), Borderline Leprosy as 1 case (0.1%). Cheeks (2.9%) are the commonest site on face followed by mouth (perioral) (2.2%), then forehead (1.3%), next periorbital (1.0%), peri nasal (0.9%) and chin, finally around ears (0.7%). Duration of less than 6 months is seen in 80 cases (8%), then 20 cases (2%) seen after 12 months. **Conclusion:** Hypopigmentation encountered in the modern world is neither contagious nor dangerous, fear, anxiety and uncertainty continue to surround this problem for patient and physician alike pediatric age group are common occurrence group.

KEYWORDS

Hypo Pigmentary Disorders, Pityriasis Alba, Vitiligo, Post Inflammatory Hypopigmentation, Hansen's disease, Pityriasis Versicolor.

INTRODUCTION

Skin color is an important visible socio-cultural characteristic of an individual and any deviation from the normal pattern of pigmentation results in significant concerns. Hypopigmentation refers to any form of decreased pigmentation whereas, depigmentation, in contrast to hypopigmentation, describes the almost total loss of pigmentation, resulting in a whitish appearance that comes from the underlying dermis. Hypopigmented lesions in children can be considered as benign as pityriasis alba, pityriasis post inflammatory depigmentation, polymorphic light eruption, vitiligo and as severe as leprosy.

AIMS AND OBJECTIVES

1. To determine the prevalence of various hypopigmented skin lesions and to evaluate their etiology and clinical characteristics among the patients of pediatric age group.
2. To determine the proportion of various hypopigmented facial lesions and to evaluate their etiologies and clinical characteristics among the patients of pediatric age group.
3. The percentage of patients having generalized skin disorders in addition to the facial lesion.

MATERIALS AND METHODS

Inclusion Criteria

Patients with hypopigmented skin lesions of face in pediatric age group (up to 12 years), both male and female presenting to Department of Dermatology out -patient clinics, Shadan Institute of Medical Sciences, Teaching Hospital and Research Centre, Peerancheru, Hyderabad, Telangana, will be included in the study during the period of February 2022 to September 2022.

Exclusion Criteria

The children whose parents have not given consent for the study.
The children with genodermatoses, primary pigmentary changes and with syndromes.
The children with congenital anomalies. And naevi.
The children with any systemic diseases or autoimmune diseases.
Parents with Consanguinity, positive family history.
Child with inborn errors of metabolism.

METHODOLOGY

This is an observational, descriptive clinical prospective study conducted in

the Department of Dermatology Out - Patient clinics, Shadan Institute of Medical Sciences, Teaching Hospital and Research Centre, Peerancheru, Hyderabad, Telangana, from February 2022 to September 2022.

After informed consent (of patient/parents/guardian), patients will be evaluated for hypopigmented lesions with the help of detailed history of the patient was recorded from proband like name, age, sex, onset, nature and duration of illness, predisposing factors like any skin diseases, prolonged illness, family history. Examination with woods lamp, Dermoscope for confirmation and investigation was used whenever it was required. Findings were recorded in proforma and whenever appropriate photographic record are kept. Statistical test used was Chi-square test. The data were subjected to descriptive analyses using the Observed data were subjected to descriptive analysis using Office 365 system software.

Ethical Clearance was taken from the institute was used.

OBSERVATION AND RESULTS

1. Percentage Of Pediatric Age Group Patients (< 12 years) Visiting Out Patient Clinics:

Total number of pediatric patients in our OPD clinics during the period February 2022 to September 2022 were 600 from the 10,000 odd patients that had attended our OPD, out of which the pediatric age group (< 12 years) were around 250 representing about 2.5% as shown below in the table-1 with hypopigmented lesions anywhere in the body and 100 patients from them with hypopigmented lesions on face (1%).

Table – 1

Patients	Number	Percentage against Total Out patients
Total Number of Pediatric patients (< 12 Years of age)	600	6
Total Number of hypopigmented lesions in patients Feb 2022-Sept 2022	250	2.5
Total patients with face hypopigmented lesions	100	1

Out of 600 out of 10K (6%) pediatric patients attending the skin outpatient clinics 250 patients (2.5%) had hypopigmented lesions all over the body and 100 patients (1%) with hypopigmented lesions on face were enrolled.

2. Age Wise Distribution Of Cases:

The youngest patient in this study was a 8month old male child (1%) and the eldest was 12year old male. The maximum number of patients belonged to 7-12 years age group (2%), followed by 1-3years (2.6 %). The mean age was 8 years.

Table - 2

Age in years	Total	
	No	%
< 1	10	1
1-3	26	2.6
4-6	44	4.4
7-12	20	2
Total	100	100

3. Gender Wise Distribution Of Cases:

Of the 100 patients included in the study, 82 (8.2%) were males and 18 (1.8%) were females.

Table - 3

Gender	Number	Percentage
Male	82	8.2
Female	18	1.8
Total	100	100

4. Site Wise Distribution Of Cases:

On Face was the most common affected site seen at cheeks in 39 cases (3.9%), perioral in 22 cases (2.2%), 13 cases (1.3%) on forehead, followed by eyes (periorbital) as 10 cases (1%) in 7 cases were periauricular (0.7%), and nasal and chin in 9 cases (0.9%)

Table – 4

SITE on face	Number Of Cases	%
forehead	13	1.3
Eyes[periorbital]	10	1
Ears[periauricular]	7	0.7
Nasal [and perinasal] and chin	9	0.9
Cheeks	39	3.9
Mouth	22	2.2
Total	100	100

5. SYMPTOMS WISE DISTIBUTION

The most common symptom was asymptomatic in 40 cases (4%), followed by itching seen in 23 cases (2.3%), photosensitivity in 17 patients (1.7 %) redness in 16 cases (1.6%), and loss of sensations in 4 cases (0.4%).

Table - 5

SYMPTOMS	PRESENT	
	No	%
Redness	16	1.6
Itching	23	2.3
Photosensitivity	17	1.7
Loss of sensations	4	0.4
Asymptomatic	40	4.0

6. Clinical Diagnoses & Duration Wise Distribution

In this study the most common disorder was pityriasis alba in 20cases (2.0%), followed by post inflammatory hypopigmentation in 12 cases with Seborrheic Dermatitis (SD) (1.2 %) Atopic Dermatitis (AD) as 8 patients(0.8%), nutritional cause in 8 patients (0.8%), vitiligo as focal 8patients (0.8%) ACD (allergic contact dermatitis) as 7 patients (0.7%), Tinea Faciei 7 cases (0.7), Pityriasis Versicolor in 6 (0.6%) cases, post infectious as after bacterial are 6 patients (0.6%), viral (0.6%), trauma after nail scratching as 4 patients (0.4%), Hansen's disease in 3 cases (0.3%) with indeterminate type 2 cases (0.2%) segmental, 1 patient (0.1%), Borderline Leprosy as 1 case (0.1%).

TABLE – 6: Diagnosis	Diagnosis		Duration	
	No	%	<6Months	>6 – 12 Months
PITYRIASIS ALBA	20	2.0	16	4
VITILIGO				
Focal	8	0.8	6	2
Segmental	1	0.1	1	2
Post Inflammatory Hypopigmentation-acd	7	0.7	5	2
Ad	8	0.8	6	2
T. Faciei	7	0.7	7	2
Sd	12	1.2	8	2

Nutritional	4	0.4	4	0
Topical Steroid After Use	8	0.8	6	2
Pityriasis Versicolor	6	0.6	3	3
Hansen'sdisease-indeterminate	2	0.2	1	1
Borderline	1	0.1	1	
POST INFECTION-bacterial	6	0.6	6	0
Viral	6	0.6	6	
Nail scratch (trauma)	4	0.4	4	
Total	100	100.0	80	20

In this study, 100 cases (8.0 %) 80 cases presented with less than 6 months history of duration, followed by 20 cases (2.0%) with 12 months duration.



P. ALBA

PIH (T. FACIEI)



VITILIGO

PIH (NAILSCRATCH)



PIH (IMPETIGO)

DISCUSSION

In our study, the most common hypo pigmentary disorders were pityriasis alba. According to Pinto and Bologna, the most common disorders of hypopigmentation in children were pityriasis alba, then vitiligo, and tinea versicolor. [1]. In our study, we have included pediatric cases below the age group of 12 years as per Nelson. [2] Of the 100 patients included in the study, 82 (8.2%) were males and 18 (1.8%) were females. The youngest patient in this study was a 8 month old male child and the eldest was 12 year old male. The maximum number of patients belonged to 7-12 years age group (41.4%), followed by 13-18 years (22.6 %). According to Sori et al, the most common age group was 6–10 years contributing to 30.0% children, followed by 11–14 years [3]. The most common symptom was photosensitivity in 72 cases (24%), followed by redness in 26 cases (8.7%), itching seen in 22 cases (7.3%), and loss of sensations in 13 cases (4.3%). In this study, 80 cases (80 %) presented with less than 6months history of duration, followed

by 20 cases (2.0%) with 12 months duration. Pityriasis alba is characterized by multiple small (0.5 – 2 cm diameter) ill-defined symmetric patches on the face, usually on the cheeks^[3]. For pityriasis alba, the fairly ill-demarcated hypopigmented macules with fine scales were the mean feature Post inflammatory hypopigmentation: It is characterized by hypopigmentation resulting after resolution of a variety of inflammatory dermatosis^[8]. Vitiligo is characterized by asymptomatic, well-demarcated, ivory-white macules and patches that may be localized or generalized^[4] vitiligo, the mean Dermoscopic features were the presence of a diffuse white glow with perifollicular pigment, perilesional hyperpigmentation, leukotrichia and the pigmentary network Hansen's disease: Borderline lepromatous and indeterminate type are most common types with slight impaired sensation^[5]. According to Singal et al, BT leprosy was the most common type, encountered in 70-3% patient^[6]. Dermoscopy of achromic pityriasis versicolor showed a fairly demarcated white area with fine scales localized in the skin creases. Caucasian skin, these lesions are fawn-colored, but in colored skin, the lesions are commonly hypopigmented^[10] This hypopigmented lesions in Caucasians are known as Pityriasis Versicolor Alba (PVA)^[9]. PV presents as oval to circular macules, showing feathered borders and fine scaling, distributed in seborrheic areas, and appearing discrete or coalescing to form large, irregular sheets on the body, which might later develop into plaques^[7].

CONCLUSION

Hypopigmentation and depigmentation have been referenced in many ancient religious texts as a curse or contagious disease. It causes emotional trauma in children that can have long-lasting effects on their self-esteem^[4]. Children with lesions in exposed areas may be subject to humiliation, psychic trauma, or even feeling of social rejection. Good communication among the physician, patient, parents, and school teachers is essential and should never be overlooked in taking care of this group of patients. This study was helpful in giving us a detailed insight of the spectrum of pigmentary alterations among the pediatric population. facial lesions however would be difficult to detect.

Declaration Of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients had given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed

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