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A CLINICAL-EPIDEMIOLOGICAL STUDY OF FACIAL DERMATOSES IN WOMEN

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The face is the most prominent part of the body. Facial blemishes and disorders directly reflect a person's physical appearance, cosmesis and self-image. They may contribute to dysmorphism and even lead to depression in susceptible individuals, especially women. Early identification and management of facial skin disorders are therefore important.

The aim: To study the clinical pattern and epidemiological determinants of facial dermatoses among females above 10 years.

Methods: The study was carried out at Medici Medical sciences from 2014 to 2017; institutional ethical clearance was obtained (dated 7/2//2015 with registration number FWA00002684)

A total of 500 female patients with facial dermatoses, aged 10 to 85 years, were enrolled in this cross-sectional study for 18 months. Detailed history and clinical examination findings were recorded in a structured proforma. Patients with sexually transmitted infections (STIs) were excluded. In addition, woods lamp examination, skin scrapings for potassium hydroxide mount, skin biopsy and other relevant investigations were done as required.

Results: A total of 500 patients were enrolled. The majority were in the 4th and 5th decades. Pigmentary dermatoses were highest, melasma predominating. Immunobullous dermatoses formed the smallest group. Occupation-wise, the majority were agricultural labourers. Many dermatoses, especially melasma, were related to occupation and lifestyle with photo-aggravation, cosmetics use and stress.

Conclusion: This study assessed the pattern of facial dermatoses among the female clientele of this institution. Hyperpigmentary dermatoses, especially melasma, emerged as the most common dermatosis for which treatment was sought. This study assessed the pattern and epidemiologic determinants of facial dermatoses in female patients in a rural Tertiary hospital at Ghanpur, Telangana. Melasma was the most frequent dermatosis for which treatment was sought. Larger population-based studies would determine the actual socioeconomic burden of the problem

Keywords: facial dermatoses, melasma, occupation, pigmentary dermatoses, immunobullous dermatoses, hyperpigmentary dermatoses, dermatosis papulosa nigra, pemphigus vulgaris, seborrheic keratoses

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1. Introduction

The face or countenance extends superiorly from the adolescent position of the hairline, inferiorly to the chin and the base of the mandible and on each side to the auricle [1]. The face has a major impact on psychosocial interactions and, from there, the individual's well-being. Facial skin differs markedly from the skin of other body regions. This makes facial dermatoses stand apart in terms of clinical presentation and a therapeutic approach [2].

Facial dermatoses include inflammatory dermatoses, infective dermatoses, photo-dermatoses, pigmentary dermatoses and degenerative dermatoses. Pigmentary disorders may be hypermelanotic, hypomelanotic, or mixed. Hyperpigmentary disorders include Ephelides, Lentigines, Melasma, Periorbital hyperpigmentation, Riehl's melanosis, Lichen planus pigmentosus, Exogenous ochronosis, Erythema dyschromicum perstans, Nevus of Ota [3, 4].

Common hypopigmented disorders involving the face are pityriasis alba, vitiligo and post-inflammatory hypopigmentation. Inflammatory facial dermatoses include acne vulgaris, rosacea, perioral dermatitis, atopic dermatitis, seborrheic dermatitis, and contact dermatitis

are grouped as eczemas. Infective facial dermatoses commonly encountered are Tinea faciei, Pityriasis versicolor, Herpes zoster, Herpes simplex, Verucca/warts, molluscum contagiosum (MC), Hansen's disease. Degenerative dermatoses include senile comedones, seborrheic keratosis, dermatoses papulosa nigra (DPNs). Photodermatoses include Tanning, Polymorphous light eruption, actinic cheilitis and phytophotodermatitis. Miscellaneous dermatoses include immunobullous disorders (Pemphigus vulgaris, Pemphigus foliaceus & Bullous Pemphigoid) and cutaneous lupus erythematosus [5, 6]. This study was done to document the clinical pattern and epidemiologic determinants of facial dermatoses among female patients, as there have been no prior studies in the rural area served by this institution. The aim of our work is to study the clinical pattern and epidemiological determinants of facial dermatoses among females above 10 years of age.

2. Materials and methods

The study was carried out at Medici Medical sciences from 2014 to 2017; institutional ethical clearance was obtained (dated 7/2//2015 with registration number FWA00002684)

A total of 500 female patients with facial dermatoses, aged 10 to 85 years, were enrolled in this cross-sectional study for 18 months. Detailed history and clinical examination findings were recorded in a structured proforma. Patients with sexually transmitted infections (STIs) were excluded. In addition, woods lamp examination, skin scrapings for potassium hydroxide mount, skin biopsy and other relevant investigations were done as required.

SAMPLING METHODOLOGY AND DATA COLLECTION:

Informed written consent was obtained from all the patients. Pre-designed proforma was filled. Privacy and confidentiality were maintained. In the selected patients, a detailed clinical history regarding onset, duration, and associated symptoms were taken. In addition, menstrual history and personal history, including habits and sleep patterns, were noted. A detailed dermatological and systemic examination was conducted, and details were recorded on a special proforma.

Routine investigations were done. Other investigations like potassium hydroxide mount of skin scrapings, woods lamp examination, and skin biopsy were carried out.

A detailed history regarding the duration of the illness, previous treatment, similar illness in the family and any relevant comorbidities were also recorded. General and dermatological examinations were done for all patients. Investigations like 10 % potassium hydroxide examination, woods lamp examination and skin biopsy were done for relevant cases.

Data were entered in Microsoft excel, and analysis was done using SPSS version 20. A descriptive statistical analysis was done. Results on continuous measurements are presented as Mean & Standard Deviation. Results on categorical measurements are presented as Percentages.

3. Results

All results are statistically processed to obtain results. Out of the total 500 patients enrolled majority, 110 patients, were between 30–39 years, followed by 50 between 50–59 years. Patients with only one facial dermatosis 321; the rest had two or more dermatoses.

Pigmentary dermatoses were predominant; the least was immunobullous dermatoses. Hyperpigmentary dermatoses were more than hypopigmentary. In hypermelanotic dermatoses, melasma was the highest, seen in 112 patients. Of these, 68 had centrofacial melasma, and 44 showed malar distributions (Table 1).

Occupation-wise agricultural workers formed the major group of 170, followed by housewives (Table 3).

Vitiligo was seen in 12 patients and Pityriasis Alba in 6. Inflammatory dermatosis, including acne, rosacea, and atopic dermatitis, accounted for 177 cases. Premenstrual flare, stress and steroid application were aggravating factors in acne.

Among infectious dermatoses, herpes labialis in 10 was the highest. Out of 54 cases of Eczemas, Seborrheic dermatitis was the highest. Other facial dermatoses included seborrheic keratosis in 25 (Table 2).

Table 1

Spectrum of facial dermatoses among patients

Facial dermatoses	Number	Percentage
Pigmentary dermatoses (n=355)		
Melasma	112	31.5
Dermatosis papulosa nigra (DPNs)	101	28.4
Periocular pigmentation	41	11.5
Post-Inflammatory Hyperpigmentation	38	10.7
Bindi dermatitis	14	3.9
Vitiligo	12	3.3
Freckles	8	2.2
Riehl’s melanosis	6	1.6
Pityriasis alba	6	1.6
Phytophotodermatitis	5	1.4
Nevus of Ota	4	1.1
Lentiginos	3	0.8
Pityriasis versicolor	3	0.8
Ashy dermatoses	2	0.5

Table 2

The spectrum of facial dermatoses among patients

Facial dermatoses	Number	Percentage
Non-Pigmentary dermatoses (n=303)		
Inflammatory dermatoses n=149		
Acne	134	89.9
Rosacea	9	6.0
Perioral dermatitis	6	4.0
Infectious dermatoses n=28		
Herpes labialis	10	35.7
Hansen’s disease	6	21.4
Tinea faciei	5	17.8
Pityriasis Versicolor	3	10.7
Molluscum Contagiosum	2	7.1
Herpes simplex	2	7.1
Eczemas n=54		
Seborrheic Dermatitis	21	38.8
Bindi Dermatitis	14	25.9
Cheilitis	8	14.8
Pityriasis alba	6	11.1
Phytophotodermatitis	5	9.2
Immunobullous Disorders n=5		
Bullous Pemphigoid	3	60
Pemphigus Vulgaris	2	40
Others n=67		
Seborrheic keratoses	25	38.4
Senile comedones	20	30.7
Acrochordons	13	20
DLE (Discoïd lupus Erythematosus)	7	10.7
Compound nevus	2	2.9

Table 3

Occupational pattern

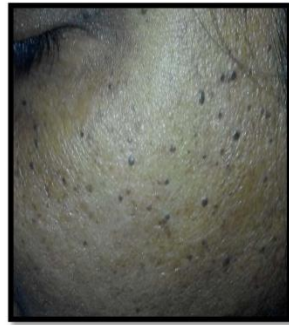
Occupation	No. of cases N=500	Percentage
Agricultural labourers	170	34
Homemaker	134	26.8
Students	100	20
Manual labourers (other than agricultural labourers)	46	9.2
Sedentary	50	10



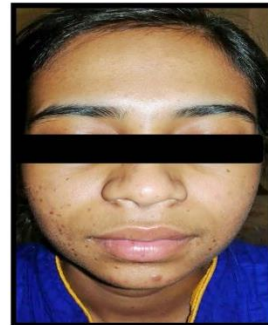
Centrofacial Melasma



Vitiligo



Dermatoses Papulosa Nigra



Freckles



Discoid Lupus Erythematosus



Tinea Faciei



Compound Nevus



Seborrheic Keratoses



Nevus of Ota



Pemphigus Vulgaris

Fig. 1. Few cases in the present study

4. Discussion

The mean age of the 500 patients enrolled was 38.41 years, with a standard deviation of 17.14. Most of the facial dermatoses in this study were related to occupation and lifestyle, with the patients giving a history of photo-aggravation, stress and cosmetics use.

Pigmentary disorders were observed in 355 patients, the majority aged 30-39 years (Fig. 1). Solar radiation and cosmetics were the common precipitating factors. Melasma was the most common disorder followed by DPNs. The findings were similar to those of Agarwal P [7] in their study of facial hypermelanosis.

Melasma was seen in 112 patients, the majority being agricultural labourers with exacerbation of pigmentation following prolonged sun exposure (Fig. 1). Yalamanchili R and Shastry V [8] also recorded agricultural labourers as the majority in their study on melasma, attributing it to prolonged sun exposure. In an article review, Ana Carolina Handel, Luciane Donida & Bartoli Miot [9] emphasized sun exposure, pregnancy and drugs as triggering factors for melasma.

Dermatosis Papulosa Nigra (DPNs) was observed in 101 patients, the majority having positive family history (Fig. 1). The lesions initially appeared on the face and later in other regions. Niang SO, Kane A [10] also reported familial predisposition.

Periorbital pigmentation was seen in 41 patients, mainly in the age group of 20-40 years (Fig. 1). Most of these were housewives with the use of cosmetics, disturbed sleep and stress. Agarwal P [7] observed similar findings. Hassan I, Aleem S et al. [11] reported inadequate sleep as a factor in the majority of their cases. Sheth PB, Shah HA, and Dave J. N. [12] noted stress as a factor for periorbital hypermelanosis in housewives.

Post-inflammatory hyperpigmentation, mainly secondary to acne and/or irritant dermatitis, was seen in 38 patients. Similar figures were given by Hassan I, Aleem S, et al. [11] and Sarkar R [13].

Freckles were seen in 3 students and 5 agricultural labourers, probably due to increased sun exposure and lack of adequate sun protection (Fig. 1).

Riehl's melanosis was found in 6 patients with a history of cosmetics/ fairness creams and steroid creams. Similar observations were made by Agarwal P [7].

Nevus of Ota was seen in three patients, two with both dermal and ocular involvement.

Among 23 hypopigmentary dermatoses, vitiligo was seen in 12 patients, P. Alba in 6, Pityriasis Versicolor in 3 and Post-inflammatory hypopigmentation in 2. These were comparable to figures by Hassan I et al. [11] and Soni B, Raghavendra KR et al. [14]. However, in both these studies, P.alba, primarily affecting paediatric age, was the commonest hypomelanotic facial disorder.

Therefore, the lower figure for P. alba in the present study is attributable to the age criterion above 10 years.

All six **Pityriasis alba** patients were atopic and aged below 15 years. However, Hashim Mahdi Jassim et al. [15] observed atopy in only 17 % of P. alba patients aged 8 months to 32 years.

Inflammatory Dermatoses included acne, rosacea and perioral dermatitis. The majority of acne patients were in the 10-30 years age group, which is comparable to figures in the seminal review by Lynn D. D. [16] et al. Topical steroid-induced aggravation of acne was noted in 22.3 % of the 134 cases. In contrast, Swathi G., Mamatha S., Kusagur A. [17] noted it in 12 % of 50 students.

Bullous dermatoses accounted for facial lesions in 5 patients, all aged above 60 years; three were of Bullous pemphigoid and two of Pemphigus Vulgaris.

Study limitations: The chief limitation of our study is that response to treatment was not included in the observations. The limited study period was considered, resulting in a less study population. The sample should have been population-based rather than hospital-based to extrapolate to the general population and thus to know the actual extent of the problem.

Prospects for further research: The subject is complex, as facial skin disorder includes a large heterogeneous group of disorders, but no precise classification exists. Opinions vary regarding the conditions to be included under facial dermatoses.

5. Conclusion

Facial dermatoses include a large heterogeneous group of disorders with no precise classification. Opinions vary regarding the conditions included under facial dermatoses. Other studies have focused on specific types of facial dermatoses like melasma, acne, vitiligo. However, there is a paucity of studies on facial dermatoses.

This **study** assessed the pattern and epidemiologic determinants of facial dermatoses in female patients in a rural Tertiary hospital at Ghanpur, Telangana. Melasma was the most frequent dermatosis for which treatment was sought. Larger population-based studies would determine the actual socioeconomic burden of the problem.

Conflict of interest

The authors declare that they have no conflict of interest concerning this study, including financial, personal, authorship, or any other, that could affect the study and its results presented in this article.

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