



A CLINICO-EPIDEMIOLOGICAL STUDY OF FACIAL HYPERMELANOSIS AT A TERTIARY CARE CENTER, ANANTHAPURAM

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ABSTRACT

Background: A group of heterogenous entities having the common clinical feature of altered facial pigmentation have been informally called as facial melanoses. Since, the cosmetic disfigurement is easily visible, it has a lot of impact on the psychological well being of the person. **Aim:** To assess the patients of facial hyper pigmentary disorders for demographic, etiological and clinical profile. **Methods:** A prospective clinical study was conducted in a tertiary care center in Ananthapuram over period of 6 months. 100 patients with facial hyper pigmentary disorders were assessed by detailed history and clinical examination. **Results:** In our study, most common age group which sought treatment was 30-50 years. Female were predominantly affected. five different facial melanosis were observed which included melasma, postinflammatory hyperpigmentation, reihl's melanosis, exogenous ochronosis, topical steroid damaged face. Reihl's melanosis was the most common disorder reported by 30 patients out of 100. **Limitations:** Dermoscopy could not be done to resource constraint. **Conclusion:** Increase in awareness and concern with appearance has led to an increase in reported incidence of facial melanosis in both sexes. Prior application of over-the-counter products poses difficulty in correct evaluation and treatment. Psychological evaluation forms an integral part of the treatment of these patients.

KEYWORDS : Facial melanosis, melasma, epidemiology

INTRODUCTION:

Human skin colour is determined by pigment located in the epidermis and the dermis. The most critical of these pigments is melanin, produced by the epidermal melanocytes.

Hemoglobin plays a role, especially in lightly pigmented skin where slight variations in perfusion are clearly visible as erythema. Other pigments such as bilirubin and beta-carotene also play a minor role in physiological and pathological pigmentation¹.

Occasionally certain metals (e.g., iron, silver, gold), drugs and deposits of drug-melanin complexes can cause altered skin pigmentation. Areas of skin indentation can sometimes appear 'hyperpigmented' as an optical illusion, and skin overlying venous structures can appear bluish in colour due to the Tyndall effect.

Unlike most internal illnesses, skin diseases, especially those on face, are often immediately visible to others and therefore lead to significant psychological consequences.

Common causes of FM include melasma, Riehl melanosis, erythema dyschromicum perstans (EDP), lichen planus pigmentosus, nevus of Ota, post inflammatory pigmentation, and miscellaneous causes including erythromelanosis peribuccale pigmentaire of Brocq.

This study was done to assess the clinical and epidemiological features of facial melanosis in patients visiting our tertiary care hospital. We did not include any hypopigmented lesions in our study and remained confined to hyperpigmented lesions only.

MATERIALS AND METHODS:

This was a descriptive observational study conducted over a period of 6 months from August 2021 to January 2022 in the department of DVL in Government General Hospital in Ananthapuram.

All the patients visiting the outpatient department for facial pigmentation disorders were enrolled in the study on their first visit. Informed consent was taken.

Detailed clinical history including age of onset, sex, duration of disease, any predisposing factors and any prior treatment taken was noted. Clinical examination was done to note the distribution of lesions, color of pigment, and any associated findings. Other body areas were examined when indicated. Hematological investigations like thyroid profile were done when needed. Clinical photographs were

taken in all cases.

INCLUSION CRITERIA:

All the patients with facial hyperpigmentation who consented for the study are included.

EXCLUSION CRITERIA:

Patients not willing to participate are excluded. All the statistical analysis was done using Microsoft Excel 2010.

RESULTS:

TABLE -1: AGE DISTRIBUTION

S.NO	AGE	NUMBER	%
1.	<20 years	04	4%
2.	21-30	12	12%
3.	31-40	62	62%
4.	41 & above	22	22%
	Total	100	

TABLE-2 SEX DISTRIBUTION:

S.NO	SEX	NO. OF CASES	PERCENTAGE
1.	Male	36	36%
2.	Female	64	64%
	Total	100	

Among 100 cases, 4% of cases are aged <20 years, 12% were in 21-30 years age group, 62% were in 31-40 years age group and 22% in age group 41 years and above. Females outnumbered the males in the study group with 64% and 36% respectively.

TABLE -3 DURATION OF SYMPTOMS:

s.no	Duration of symptoms	No. of cases	percentage
1.	<1 month	15	15%
2.	1-6 months	60	60%
3.	>6 months	25	25%

TABLE -4 TYPE OF THE DISEASE:

s.no	Disease	No. of cases	percentage
1.	Riehl melanosis	30	30%
2.	Melasma	24	24%
3.	Seborrheic melanosis	13	13%

4.	Post inflammatory hyperpigmentation	6	6%
5.	Ashy dermatosis	6	6%
6.	Drug induced hyperpigmentation	5	5%
7.	Lichen planus pigmentosus	5	5%
8.	Topical steroid damaged face	4	4%
9.	Peri oral hyperpigmentation	2	2%
10.	Peri orbital hyperpigmentation	2	2%
11.	Freckles	2	2%
12.	lentigines	1	1%

TABLE 5 COSMETIC USAGE:

S.no:	no. of cases	Cosmetic usage	Percentage
1.	38	Hair dye	38%
2.	22	Topical steroid	22%
3.	28	Fairness creams	28%
4.	12	Ayurvedic creams	12%

TABLE-6 SITE OF INVOLVEMENT:

s.no:	Site	No. of cases	Percentage
1.	Cheeks	10	10%
2.	Nose + cheeks	12	12%
3.	Peri oral	2	2%
4.	Peri orbital	2	2%
5.	Ramus of the mandible	4	4%
6.	Forehead	8	8%
7.	Cheeks + fore head	16	16%
8.	Chin	8	8%
9.	All over face	38	38%

TABLE-7 TYPE OF MELASMA

s.no:	Melasma	No. of cases	Percentage
1.	Epidermal	5	22.7%
2.	Dermal	3	13.6%
3.	Mixed	11	50%
4.	Indeterminate	3	13.6%
	Total	22	

TABLE -8 PATTERN OF MELASMA

s.no	Pattern of melasma	No. of cases	percentage
1.	Centrofacial	12	54.54%
2.	Malar	6	27.27%
3.	Mandibular	4	18.18%



Pictures depicting Riehl's melanosis ,seborrheic melanosis,melasma and topical steroid damaged face respectively.

DISCUSSION:

Number of females with facial hyper melanosis is seeing an upwards trend among the out patients presenting to dermatologists and various contributing factors are: increased awareness, society and marriage

pressures to look more beautiful, use of drugs and cosmetics, increased sun exposure and rising obesity and other hormonal abnormalities due to changing life styles.

Age and sex:

Among the 100 patients, majority belonged to age groups of 31-40 years (62%) followed by 21-30years (22%). In both these age groups, females outnumbered males contributing to 64 and 36 cases respectively.

In the review article of Ana Perez et al ², facial hyperpigmentation is common in middle-aged women, and are related to endogenous (hormones) and exogenous factors (such as use of cosmetics and perfumes, and exposure to sun radiation) and also facial hyperpigmentation causes significant cosmetic disability which may be the reason for slightly a greater number of female patients seeking medical advice.

Disorders presenting with facial hyperpigmentation:

The most common cause for facial hyperpigmentation in our study was Riehl's melanosis seen in 30% of cases, followed by melasma (24%), seborrheic melanosis (13%), post inflammatory hyperpigmentation (6 %) ashy dermatosis (6%) and drug induced hyperpigmentation (5%), LPP (5%), Other causes were topical steroid damaged face (4%), perioral hyperpigmentation (2%), periorbital hyperpigmentation (2%), freckles (2%) lentigines (1%), were also observed.

Riehl's melanosis:

It has constituted 30% of cases. Patients were in the age range of 35-45 years with mean age of 37.5years and more common in males, observed in 60% cases. All the cases had history of cosmetic use for a mean duration of 3 years and the various cosmetics used were fairness creams, ayurvedic creams, hair dye and steroid creams. Rorsman H ³ also stated that the commonest cause was sensitizing chemicals in cosmetics.

Melasma:

24% of cases in our study comprised melasma. The age range of melasma patients was 21-45 years with mean age being 33 years. This was in accordance with the study conducted by Arun Achar et al [4], where the mean age was 33.45 years. Melasma is more common in women (79%). 20.3% males were found to have melasma which was comparable to 19.87% in a study conducted by Arun Achar et al ⁶ in India and 10% by Vazquez et al.⁴

In our study centrofacial pattern was the most common in 54.54% followed by malar 27.27%, seen in 32% and mandibular pattern seen in 18.18% which is in accordance with Arun achar et al study.

Seborrheic melanosis:It constituted 13% of the cases. Patients were in the age range of 25-45 years with a mean age of 35 years.

Ashy dermatosis:

It was seen in 5% of the cases. Patients were in the age range of 25-44 years with mean age of 31 years which was little lower compared to study of Vega et al where mean age was 33.6 years. It was seen more in females compared to males which was similar to study conducted by Vega et al.⁵

Lichen planus pigmentosus is a variant of lichen planus and prevalence in our study was similar to other studies and most of the patients were >35 years well in accordance to Nag F at al study.

Drug induced hyperpigmentation:

It represents 5% of all cases of acquired hyperpigmentation. Patients were in the age range of 24-46 years with mean age of 33.48 years and majority of patients were females. History of exacerbation of pigmentation on sun exposure was seen in 3 cases.

Topical steroid damaged face:

It constituted 4% of the cases, of which 75% were females and 25% were males. Patient belonged to age range of 21-45 years with mean age of 32 years. Majority of the patients belonged to age group 21-30 years which was similar to study conducted by Dayamay pal et al ⁷ and Saraswat et al.⁸

Perioral hyperpigmentation:

It was seen in 2% of the cases. Patients were in the age range of 21-40

years with mean age of 31 years. It was seen mainly in the females. Freckles are mostly seen in fairer skin with sun exposure also implicated. Lentiginos can occur anywhere in body and have a genetic role majorly.

CONCLUSION:

Facial hypermelanosis is commonly encountered by dermatologists and has multiple patterns. The female gender is particularly vulnerable to the social and psychological constraints of it. The role of hormonal alterations, life style factors, occupation in the above said age group needs to be ascertained.

The treatment of facial hyperpigmentation is still challenging. It is important to have a comprehensive understanding and information on the clinicoepidemiological and etiological factors of various clinical entities of facial hyperpigmentation for better management of patients.

Conflict of Interest: No conflict of interest.

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