IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 11 Ser.11 (November. 2019), PP 09-14
www.iosrjournals.org

Facial Melanoses: A Clinical Study in a Tertiary Care Hospital in South India.

*[1]Gonu Bharathi,[2]GrandhiUsha
[12]Dept. of DVL, S.V. Medical College, Tirupati, Andra Pradesh
Corresponding Author: GrandhiUsha

Abstract
Background: *Facial melanosis is one of the common dermatological disorder that comprises a group of heterogenous conditions of varying etiology, clinically characterised by discolouration of face and thus resulting in distress of cosmetic disfigurement and in turn affecting the quality of life.*
Aims: *To assess various spectrum & etiology of facial pigmentary disorders.*
Methods:*This is a prospective observational hospital-based study, conducted in a tertiary center over period of 6 months, One hundred ninety consecutive patients with facial pigmentary disorders were included in the study after taking informed consent. Detailed history, clinical examination were recorded, & relevant investigations were done wherever necessary.*
Results: *The maximum number of patients belonged to 31–40 years age group (25.7%). Females predominated the study, with a female to male ratio of 1.7: 1. Among patients of facialhypermelanosis, melasma was the most common 32.6%, followed by postinflammatory hyperpigmentation 19.4%, periorbital hyperpigmentation 8.9%.Among facial hypopigmenteddisorders Pityriasis alba 8.4% was the most common cause of facial hypomelanosis followed by vitiligo 5.2%.*
Conclusion: *Female preponderance was observed in the study with hypermelanosis more common than hypomelanosis. Melasma was the most common hypermelanotic facial disorders and pityriasis alba was the commonest among hypomelanoticdisorders. A variety of pigmentary disorders, both hyper and hypopigmentation, with variable clinical presentations and etiological factors, and associated with significant distress affecting the face.*
Key words*: facial melanoses,melasma,vitiligo*

Date of Submission: 11-11-2019 Date of Acceptance: 27-11-2019

I. Introduction

Facial melanotic disorders comprise several more or less well defined clinical syndromes, often the cause of pigmentary disorders is obscure, sharing a common clinical feature of altered pigmentation of the face resulting in cosmetic disfigurement. Facial melanotic disorders can eitherbe hyper‑melanotic or hypo‑melanotic in varying intensity. Facial hyper‑melanotic disorders include heterogenous group of conditions including melasma, lichen planuspigmentosus (LPP), post inflammatory hyperpigmentation and periorbitalhyperpigmentation .Vitiligo, pityriasisalba,Xanthelasma, Nevus achromicus, Indeterminate hansens and postinflammatory hypopigmentation are the most common hypo‑pigmented disorders involving the face. Facial melanotic disorders are a wide range of disordes with individual variation in presentation, diagnostic dilemma and psychological disturbances [1,2].There are very few studies in the literature about facial melanotic disorders. Our study involved both hyper and hypo pigmentary conditions causing facial melanosis.

II. Methods

This was a hospital based, Prospective study conducted in S.V.R.R Govt.General Hospital, Tirupati. An informed consent was obtained from all the patients included in the study. 190 consecutive adult patients attending DVL OP department with dermatoses involving face with altered pigmentary disorders from December 2018- May 2019 were included in the study. After taking informed consent, detailed clinical history regarding precipitating factors such as sunlight,endocrineabnormalities,atopy,pregnancy,use of topical medicaments/cosmetics, etc., complete physical examination & relevant investigations were done to establish diagnosis, the data was tabulated and analysed.

III. Results

The study comprised of 190 patients of altered facialpigmentation. The age of patients ranged from 6 to 65 years, with a mean age of 32.5 years. The most common age group affected is 31-40 years (25.7%)followed

by 21-30 years (18.9%) shown in Table 1. The study comprised 70 males and 120 females, with a female to male ratio of 1.7:1.

Table 1: Age and sex distribution among study group

Age group	Males	Females	Total
<10yrs	8	10	18
11-20 yrs	12	18	30
21-30 yrs	14	22	36
31-40 yrs	9	40	49
41-50 yrs	8	14	22
51-60 yrs	10	12	22
>60 yrs	9	4	13
Total	70	120	190

During the study period 16 different categories of facial melanotic conditions both hypo-pigmented and hyper-pigmented conditions were encountered. Among patients of facial hyper-melanosis, melasma was most frequently encountered 32.6%. Pityriasis alba was most common 8.4% among facial hypo-melanosis. Females were more commonly affected in all conditions of facial hyper-melanosis, Whereas male predominance is observed in facial hypo-melanosis.Among facial hyper-melanosis conditions, melasma 62(32.6%) was the commenst. Three clinical patterns of melasma were observed. Involvement of malar area most common presentation 34(17.8%) [shown in image 1 & 2],centrofacial 17 (8.9%),&mandibular area11(5.7%),post inflammatory hyperpigmentation 37(19.4%) with majority of them having post acne hyperpigmentation 29(15.2%) , allergic contact dermatitis to hair dye 5(2.6%) &seborrheicmelanosis 3(1.5%),periorbitalhypermelanosis 17(8.9%), lichen planuspigmentosus 8(4.2%),ephelids 4(2.1%)[shown in image 3],nevus of ota 3(1.5%),dermatosispapulosanigricans 12(6.3%),seborrheic keratosis 8(4.2%) [shown in image 4],riehlsmelanosis 2(1.05%) [shown in image 5].

Hypo-pigmented conditions involving face are pityriasis alba 16(8.4%),vitiligo 10(5.2%),post inflammatory hypopigmentation 4(2.1%) following polymorphic light eruption & discoid lupus erythematosus ,xanthelasma 3(1.5%),nevus achromicus 2(1.05%), and indeterminate hansens 2(1.05%).Family history was significant in Melasma 12(19.3%),ephelides2(50%),pityriasis alba 7(43.7%)&vitiligo 3(30%). History of cosmetic usage was present in 40 (21%) patients. The most common site of facial melanosis was the cheeks in 62 (32.6%) followed by periocular in 37(19.4%),forehead 27(14.2%), and temples 20(10.5%).Diffuse pigmentation is observed in 30(15%). Pigmentary disorders are often involved either single siteor in combination of subsites.14(7.3%)had multiple subsites of involvement. 25 (13.1%) had involvement of other sites of body as well.Almost all patients of facial melanoses had aggravation on sun exposure. Endocrine abnormalities (thyroid disorders) were observed in 10(5.2%).Epidermal pigmentation clinically presents with brown colour observed in 142(74.7%) followed by dermal pigmentation presenting with slate gray/blue colour in 48(25.2%).

Table 2 : Showing facial melanotic conditions

FACIAL MELANOSES	TOTAL NO. OF CASES(%)
FACIAL HYPERPIGMENTATION CONDITIONS	153(80.5%)
-MELASMA	62(32.6%)
-POSTINFLAMMATORY HYPERPIGMENTATION	37(19.4%)
-PERIORBITAL PIGMENTATION	17(8.9%)
-DERMATOSES PAPULOSA NIGRICANS	12(6.3%)
-SEBORREIC KERATOSIS	8(4.2%)
-LICHEN PLANUS PIGMENTOSUS	8(4.2%)
-EPHELIDES	4(2.1%)
-NEVUS OF OTA	3(1.5%)
-RHEILS MELANOSIS	2(1.05%)
FACIAL HYPOPIGMENTED CONDITIONS	37(19.4%)
-PITYRIASIS ALBA	16(8.4%)
-VITILIGO	10(5.2%)
-POST INFLAMMATORY HYPOPIGMENTATION	4(2.1%)
- XANTHELASMA	3(1.5%)
-INDETERMINATE HANSENS	2(1.05%)
-NEVUS ACHROMICUS	2(1.05%)

IV. Discussion

Facial pigmentary disorders are a heterogenous group of commonly occurring conditions with altered pigmentation with a great degree of psychological impact affecting the quality of lifedue to their easyvisibility.There is rapid increase in these conditions due to increased usage of over the counter cosmetics/drugs.

The mean age of patients in our study was 32.5 years which is relatively higher than other studies[3,4]. The most common age group affected was 31-40 years, which is almost similar to the study by Hassan et al.[5] which showed most common age group of 21-40 years.Female predominance is observed in almost all categories.Facial melanosiscategorised into hyper-pigmented conditions &hypopigmented conditions. Facial hyper-pigmented conditions are more frequent than hypo-pigmented conditions. Among hyper-pigmentedconditions,melasma was most common,& among hypo-pigmented conditions pityriasisalba was more frequently observed.Sixteen different categories of facial dispigmentation conditions were observed.

Melasma was most common among facial melanosis(32.6%),average age of patients was 30.2 years. Malar area was most commonly involved.These findings were similar to findings of Hassan et al.[5] but with relative lower percentage. 22.8% of melasma patients had history of exacerbating factors such as sun exposure,pregnancy,contraceptive pills usage.Postinflammatoryhyper-pigmentation(PIH) was the second mostcommon cause of facial melanosis 19.4%. Acne was most common cause of PIH followed by allergic contact dermatitis to hair dye &seborrheicmelanosis, peri orbital hyperpigmentation constituted 8.9% in our study,of which 29.4% had positive family history, these findings were higher when compared to other studies.[5,6,7]

Dermatosispaulosanigricans was observed in 6.3%, predominantly affecting peri-orbitalarea.History of aggravation on sun exposure was present in 58.3%of the affected individuals.Seborreic keratosis constituted 4.2% in our study commonly affecting the periorbital area, with mean age of onset 48.3 years.Ephelids were observed in 2.1%, Mean age of onset was15.6 years which was similar to other studies.

Lichen planuspigmentosus, a variant of lichenplanus, was observed in 4.2% ,forehead & temples were most common sites affected,pigmentation varied from slate gray to brownish balck colour.37.5% had involvement of other sites of body.These findings were in concordance with other studies of Hassan et al.[5],Bhutani*et al.*[8]andVega*et al.*[9]Riehl'smelanosis was observed in1.05% which is lower percentage than other studies,Almost all patients had usage of cosmetics over the counter with diffuse brownish black pigmentation & photosensitivity. Rorsman stated that the commonest cause was sensitizing chemicals in cosmetics.[10]

Pityriasisalba is a relatively common hypo-pigmented disorder with frequent association of atopy. Pityriasisalba was seen in 8.4%in our study with early age of onset. Mean age was 13.4 years and 37.5% had atopy history. In a study by Vinod*et al.*[11] association of atopy observed in 85.5% of cases.Vitiligo has a predilection for regions such as theface, groins, axillae, areolae and genitalia.[12]Similarly inour study also, facialvitiligo was common cause of facialhypo-pigmentation 5.2%. Facial vitligo was most commonlyperioral and segmental followed by focal. Associatedextrafacial involvement was seen in 27.6%, and 12.8% hadassociated thyroid disorders.These findings are in contrast to Hassan et al. focal vitiligo was most commonly observed, 40% prevalence ofthyroid disorders was observed in vitiligo patients in a study by Kumar *et al.*[13]

Other hypo-pigmented conditions reported were indeterminate hansens 1.05%,xanthelasma 1.5% & post inflammatory hypopigmentation following polymorphic light eruption observed in 2.1%.Nevoid conditions with hypopigmentation was Nevus achromicus seen in 1.05% whereas hyper pigmented one was Nevus of ota in 1.5% of study population.

The limitations of our study were smaller cohort size,outpatient based study and was not true representation of population,Many conditions involving face(drug induced pigmentation,addissonian pigmentation etc.) were not presented during the study period.

V. Conclusion

Facial melanoses present with overlapping clinical features,resulting in diagnostic difficulties and significant impact on quality of life. Hence precise clinical insight of conditions affecting face plays major role for better management. Hyperpigmented conditions involving face is more common than hypopigmented conditionsin our study. Melasma was the most common facial melanotic disorder. Among hypopigmented conditions,pityriasisalba was most common.

References

[1]. Pichardo R, Vallejos Q, Feldman SR, Schulz MR, VermaA,Quandt SA, *et al.* The prevalence of melasma and itsassociation with quality of life in adult male Latino migrantworkers. Int J Dermatol 2009;48:22‑6.

[2]. Pawaskar MD, Parikh P, Markowski T, McMichael AJ,Feldman SR, Balkrishnan R. Melasma and its impact onhealth‑related quality of life in Hispanic women. J DermatologTreat 2007;18:5‑9.

[3]. Achar A, Rathi SK. Melasma: A clinico‑epidemiological studyof 312 cases. Indian J Dermatol 011;56:380‑2.

[4]. Goh CL, Dlova CN. A retrospective study on the clinicalpresentation and treatment outcome of melasma in a tertiarydermatological referral centre in Singapore. Singapore Med J1999;40:455‑8.
[5]. Hassan I, Aleem S, Bhat YJ, Anwar P. A clinicoepidemiologicalstudy of facial melanosis. Indian J DermatolVenereolLeprol 2015;2:34-40.
[6]. Ranu H, Thng S, Goh BK, Burger A, Goh CL. Periorbitalhyperpigmentation in Asians: An epidemiologic study anda proposed classification. DermatolSurg 2011;37:1297‑303.
[7]. Sheth PB, Shah HA, Dave JN. Periorbitalhyperpigmentation:A study of its prevalence, common causative factors and its association with personal habits and other disorders. IndianJDermatol 2014;59:151‑7.
[8]. Bhutani LK, Bedi TR, Pandhi RK, Nayak NC. Lichen planuspigmentosus. Dermatologica 1974;149:43‑50.
[9]. Vega ME, Waxtein L, Arenas R, Hojyo T, Dominguez‑Soto L.Ashydermatosis and lichen planuspigmentosus: Aclinicopathologic study of 31 cases. Int J Dermatol 1992;31:90‑4.
[10]. Rorsman H. Riehl'smelanosis. Int J Dermatol 1982;21:75‑8.
[11]. Vinod S, Singh G, Dash K, Grover S. Clinicoepidemiologicalstudy of pityriasisalba. Indian J DermatolVenereolLeprol2002;68:338‑40.
[12]. Pegum JS. Vitiligo. Br J Dermatol 1996;134:373.
[13]. Kumar KV, Priya S, Sharma R, Kapoor U, Saini M, Bisht YS.

Autoimmune thyroid disease in patients with vitiligo:
Prevalence study in India.EndocrPract 2012;18:194‑9.

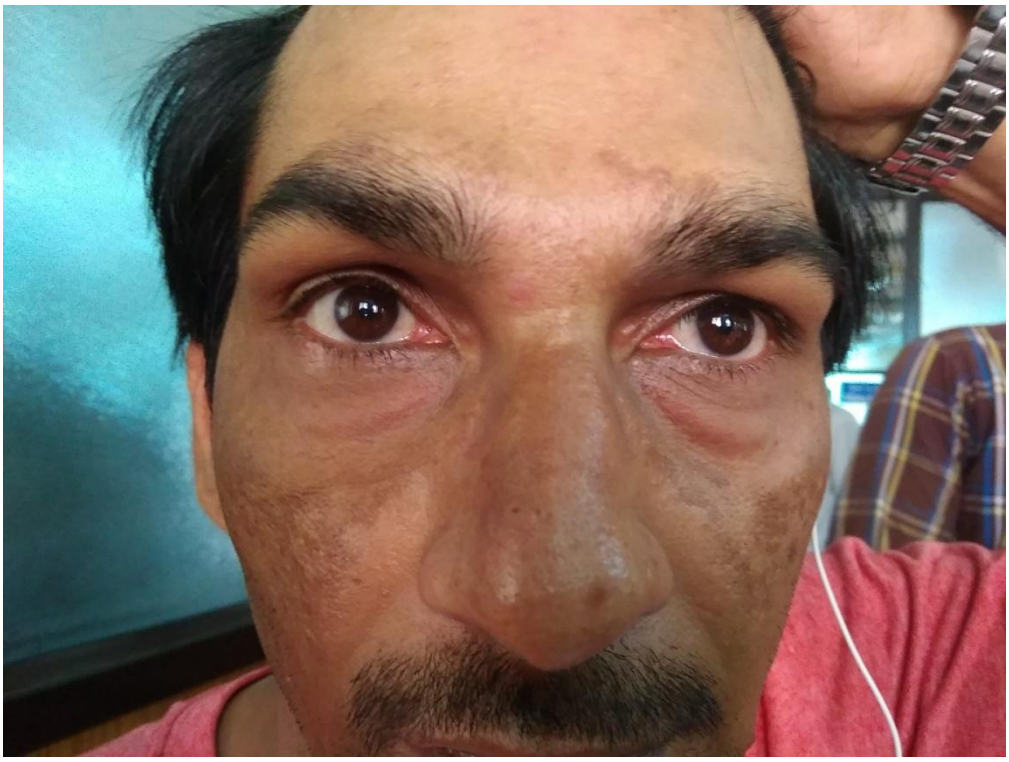

Image 1:melasma involving malar area, cheeks &nose

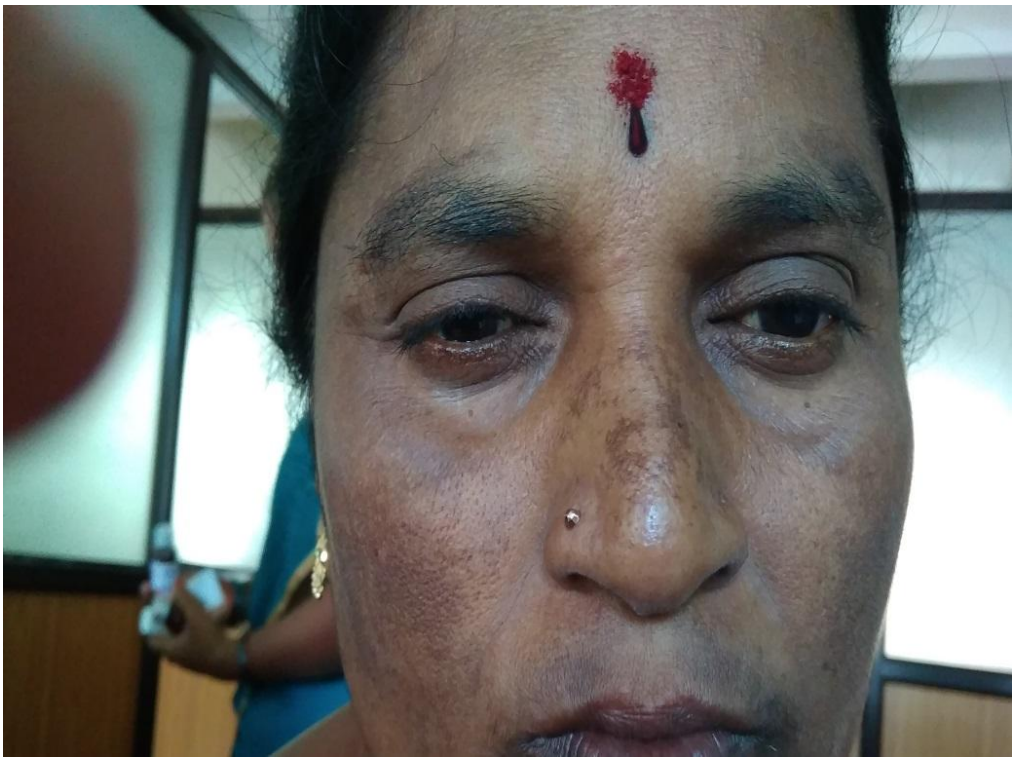

Image2 : Melasma involving malar area & cheeks

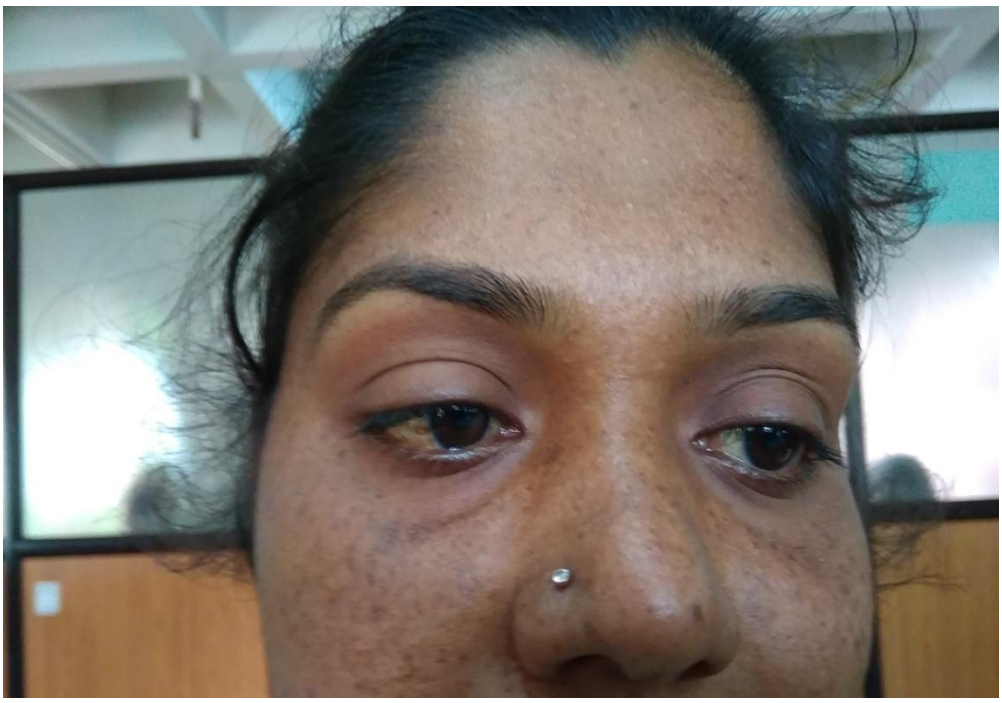

Image 3:ephelids over malar area

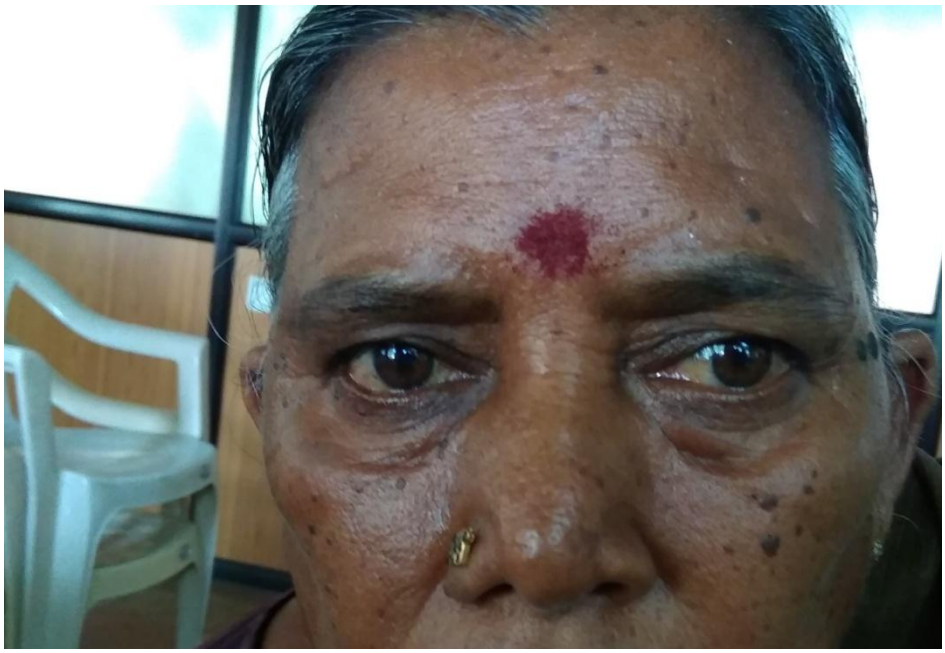

Image 4:seborrheic keratosis involving periorbital area and fore head.

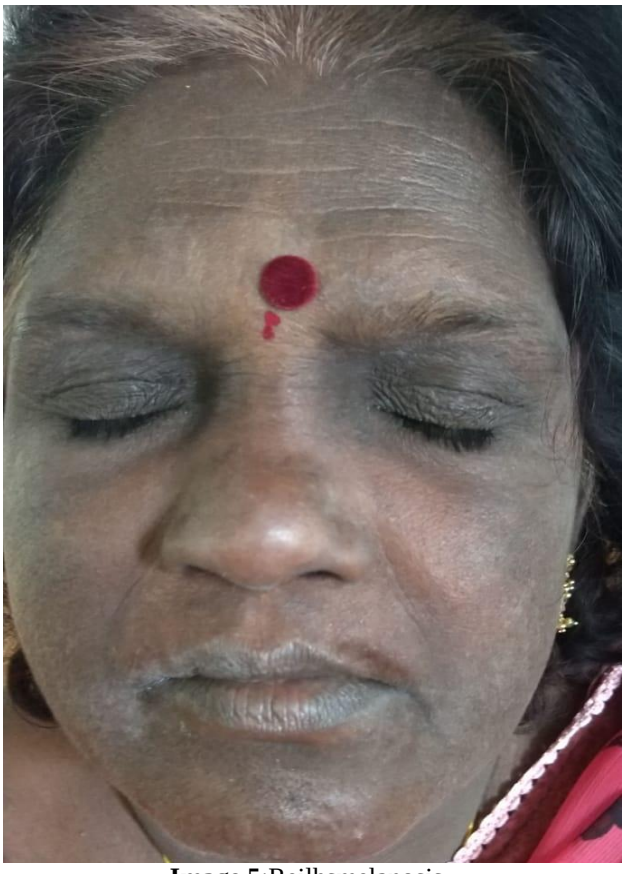

Image 5:Reilhsmelanosis.

Gonu Bharathi. "Facial Melanoses: A Clinical Study in a Tertiary Care Hospital in South India." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 11, 2019, pp09-14.