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Clinico-Epidemiology Study of Facial Hypermelanosis at Griya Satya Clinic in January 2017-December 2019

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Abstract: ***Background: Hyperpigmentation is a condition characterized by the accumulation of pigment in the epidermis and dermis. Facial pigmentations are the most cosmetically important. They are common inmiddle-aged women, and are related to endogenous (hormones) and exogenous factors (such as use ofcosmetics and perfumes, and exposure to sun radiation). Melasma is a hypermelanosis condition that often causes cosmetic disturbances in a person, so it is necessary to establish an appropriate diagnosis and management. Objective: The aim of this study was identify clinico-epidemiology of patient with facial hypermelanosis at Griya Satya Clinic in January 2017-December 2019. Method: The study was done with retrospective design by collecting data from medical records of patient withfacial hypermelanosis at Griya Satya Clinic in January 2017-December 2019. All patients werediagnosed based on anamnesis and clinical presentation. Result: In this study, all patients with facial hypermelanosis were female. There were 133 patients (13.54%) of all female patients who visited during the study period. This type of facial hypermelanosis is the most common were melasma 87 patients (65.41%), post inflamatory hyperpigmentation (PIH) 38 patients (28.57%), lentigo solaris 5 patients (3.76%), and freckles 3 patients (2.26%). Conclusion: Facial hypermelanosis is a clinical feature of a diverse group of disorders, the most common ofwhich is melasma. Enforcement diagnosis and appropriate treatment are needed in the management of melasma, as well as proper education to the patient because of thismelasma is a chronic and difficult to treat disease.***

Keywords: Facial Hypermelanosis, Melasma, Postinflamatory Hyperpigmentation, Retrospective Study

1. Introduction

The colour of normal skin comes from a mixture of pigments, of which the predominant is melanin. Disorders of hyperpigmentation comprise a large group of skin conditions characterized by an increase in melanin production, increase in density of active melanocytes, abnormal melanin distribution and/or deposition of exogenous pigments.[1]Facial melanoses are commoner in Fitzpatrickskin types III and IV and form a major portion of patientsvisiting a dermatologist. Though the pathogenesis is notclearly understood in many cases, both light andphotosensitizing chemicals seem to play an importantrole.[2]

Melasma is a disease hypermelanosis is most commonly encountered andusually found on the face mostfrequent sun exposure. Pathogenesisof this disease is not very clear, but the effectsgenetic and hormonal combined withUV radiation plays a very important role asoriginator. This disease is rarely reported onpeople who have not yet puberty and are seen more oftenin women especially in their reproductive age,but it can also be about teenagers, parents who areon medication, and sometimes onmen who are usually idiopathic.[3] This study was conducted to identify theclinic-epidemiology profile of patient with facial hypermelanosis at Griya Satya Clinic Padang period between January 2017 to December 2019.

2. Method

This retrospective study design was done by collecting data from the medical records from all patient diagnosed facial hypermelanosis at Griya Satya Clinic between January 2017 to December 2019. All the patients were diagnosed depending on the anamnesis and the clinical finding. All the patient were classified by sex, age, and diagnosed.

3. Result

There were total of 1419 patients who visited the Griya Satya Clinic from January 2017-Desember 2019, 437 males (30,80%) and 982 females (69,20%). In this study, all patients with facial hypermelanosis were female. There were 133 patients (13.54%) of all female patients who visited during the study period. This type of facial hypermelanosis is the most common were melasma 87 patients (65.41%), postinflamatory hyperpigmentation (PIH) 38 patients (28.57%), lentigo solaris 5 patients (3.76%), and freckles 3 patients (2.26%).

Table 1: Prevalence of patients visiting Griya Satya Clinic between January 2017 and December 2019

Year	Male	Female
2017	156	381
2018	159	345
2019	122	256
Percentage (%)	30,80%	69,20%

Table 2: Clinico-epidemiology profile of facial hypermelanosis between January 2017 and December 2019

No	Clinical Profile		Patient (n)	Percentage (%)
1	Type of Facial Hypermelanosis			
	Melasma		87	65,4
	PIH		38	28,57
	Lentigo solaris		5	3,76
	Freckles		3	2,26
2	Age			
	Melasma			

	Young adult	: 15-24	-	-
	Adult	: 25-64	86	98,85
	Elderly	: >65	1	1,15
	PIH			
	Young adult	: 15-24	26	68,42
	Adult	: 25-64	12	31,58
	Elderly	: >65	-	-
	Lentigo Solaris			
	Young adult	: 15-24	-	-
	Adult	: 25-64	5	100
	Elderly	: >65	-	-
	Freckles			
	Young adult	: 15-24	2	66,67
	Adult	: 25-64	1	33,33
	Elderly	: >65	-	-

4. Discussion

Facial hypermelanosis carries immense psychological impact owing to its evident cosmetic disfigurement and social stigmas attached to it. Moreover, people of Asian and African descent constitutively have a darker phenotype which is more vulnerable to pigmentation. Facial hypermelanosis encompasses a myriad of clinical entities which are commonly encountered: melasma, peri-orbital melanosis, postinflammatory hyperpigmentation (PIH), lichen planus pigmentosus, Riehl's melanosis, freckles and lentigenes, exogenous ochronosis, acanthosis nigricans, erythema dyschromicum perstans, and uncommonly poikiloderma of Civatte, erythromelanosis follicularis of face and neck, nevus of Ota.[4,5]

Other conditions that may result in abnormal pigmentation of the facial region include Mongolian spots, late-stage failure ofcardiopulmonary or renal system and drug/heavymetal induced pigmentation such as with iron, silver, gold, chloramphenicol, tetracycline, amiodarone, pirfenidone, antimalarials and antipsychotics.[6]Systemic disorders including Addison disease, haemochromatosis and porphyria cutanea tarda can also lead to abnormal pigmentation of face.[7] The diagnosis and differentiation of these conditions are based on history and clinical examination supplemented in some cases by Wood's lamp and histopathological evaluation.

Exposure to ultraviolet rays have been found to be crucial in various studies as it leads to increased levels of various hormones: alphamelanocyte-stimulating hormone, corticotrophin and also interleukin (IL)-1 that, in turn, results in increased melanin production. In PIH, skin inflammation results in the production of cytokines, prostaglandins, leukotrienes which further stimulate melanin synthesis. The most common cause attributed was acne. Multiple other studies have also reported similar findings.[8]

Most of the studies worldwide on facial hypermelanosis have reported a female predominance.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.[4,5]This is consistent with this study, that the facial hypermelanosis most often found is melasma. In this study it was also found that of all patients who came for treatment with facial hypermelanosis at the Griya Satya Clinic were female and most were in the age range 25-64 years. This may have something to do with the influence of hormones and exposure to ultraviolet rays during his life. In this study, PIH was the second most common type of facial hypermelanosis found. The cause of PIH in this study was due to previous acne and the age range of 15-24 years was mostly. This is probably due to the increased activity of the sebum glands in that age range.

Although hyperpigmentation is typically not harmful, it can cause deleterious emotional and psychological impact on the health-related quality of life of affected individuals. Special considerations when evaluating individuals with skin of color with facial hyperpigmentation can improve both cutaneous disease and quality of life.[9]

Treatment protocols of different hyperpigmentary disorders depend on the cause and site of pigment present. Epidermalhyperpigmentation responds to bleaching creams, peeling, fractional ablative and non-ablative lasers, or intense pulsedlight. Sun avoidance, sun protection (caps, umbrella), and sunscreens against UVA and UVB are essential in all cases. Treating the underlying condition helps to stop the progress of the disease and may lead to decreased pigmentation. When using topical and oral therapies, the duration of treatment usually takes 12 weeks to show results. With energy-based devices (lasers and IPL), it requires multiple sessions spaced 2, 4, or 8 weeks apart, according to different regimens.[10]

5. Conclusion

Facial hypermelanosis is a condition that more commonly affectsindividuals with skin of color. Hyperpigmentation, specifically occurring on the facial areas, canhave deleterious effects on quality of life. Unfortunately, current treatment protocols are typically not curative and have limited efficacy.Sun-protective measures are the mainstay of both prevention and treatment, whereas a multitude of othermodalities, including both non-invasive and invasivetechniques, can be used depending on the etiology ofdyspigmentation.The incidence of facial hypermelanosis in Griya Satya Clinic was 133 patients from January 2017-December 2019 with melasma was the most common type. More studies should be done to know the incidence of facial hypermelanosis in other hospital in Indonesia.

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