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AGE OF ONSET AND TREATMENT TRENDS OF MELASMA IN PAKISTAN

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Abstract:

Melasma is an acquired hypermelanosis of the skin usually affecting the face and other sun-exposed areas. There is no universally effective specific therapy for the disease and patients find it difficult to choose one treatment modality for them. The main objectives of this study was to determine the age of onset of melasma, treatment seeking behaviours and reasons for treating Melasma in the first place and for not complying with the treatment options for Melasma. A cross-sectional survey was conducted via a self-administered anonymous questionnaire on 100 conveniently selected melasma patients visiting Out Patient Department (OPD) of Sir Ganga Raam hospital Lahore. Out of 100 melasma patients; most being females, the average age of onset of Melasma was 26.42±7.664 years. As a treatment trend 14% sought treatment immediately after melasma while 32% sought no medical treatment/consultation. Cosmetic reason; looking good (72%) and social pressure (12%) contributed the most in seeking treatment for melasma. The most frequently used treatment modalities were; Bleaching agents (69%) and fairness creams (56%) while dermatologists ranked third. Patients used many treatments with less than required compliance to any with major reason being expenses (22%) and long duration of treatment (13%). Public awareness should be employed that melasma is a disease which has to be treated by a dermatologist, and not just a skin darkening to be treated by a lightening agent.

Keywords: *Melasma, treatment, Pakistan, dermatologist, beauty.*

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INTRODUCTION:

Melasma is hyper-melanosis of skin due to pigmentary system dysfunction. It is more common in dark complexioned women. [1] There is no universally effective specific therapy for the disease and condition has tendency to relapse. [2] Etiological factors such as genetic influence, (UV) exposure, hormones, cosmetic use, phototoxic and anticonvulsant drug use, thyroid autoimmunity, heat and stress play a role. [3,4,5,6] Hormonal factors acting as major contributors to melasma development, the age of onset can be thought of as after puberty.

In the literature, most of the treatment options which have been studied and recommended are discussed below. Physical agents that can help with melasma include covering face. [1] Sunscreens protect the skin from actinic damage and systemic sunscreens include indomethacin, Chloroquine, Vitamin C, E, beta-carotene, green tea and fish oil. [7] Broad spectrum sunscreen with a Sun Protection Factor (SPF) of at least 30 on daily basis are recommended. [8]

Hydroquinone (HQ) is considered the first line and gold standard at the same time.[7] Tretinoin 0.1% (retinoids) and Mequinol 2% have shown to be equally effective as HQ 4%. [8] but adapalene has has shown better results than tretinoin. [1] Topical corticosteroids are another treatment option. Because of atrophy and other side effects, triple combination therapy containing HQ, Tretinoin and a steroid are recommended. [9] Chemical peels (e.g. Glycolic acid) remove melanin and thus a promising modality for treatment of dark complexioned patient.[9] Vitamin C (Ascorbic acid) is an anti-oxidant and 25% L-ascorbic acid is shown to be an effective treatment modality for melasma.[10] Multivitamins have more anti-melanogenic effect than vitamin C. [11]

LASERs have been popular this past decade and act by selective photothermolysis, for example, QS-Nd:YAG(1064 nm) destroys melanosomes. Combination of ablative and pigment selective LASERs are also used. [9,12,13] On the organic side, botanical extracts have antioxidant and quenching properties. Whatever treatment modality is used, patient education remains an important part of the therapy. [5,9]

The main objectives of this study were to determine the age of onset of melasma, assess the treatment seeking behaviours of the patients of melasma, time interval for the consult/treatment after patients get melasma and patients' reasons for seeking treatment/consultation for melasma. The main reasons behind patients' not being able to comply with the treatment options were also assessed.

MATERIALS AND METHODS:

A cross-sectional survey was conducted via a self-administered anonymous questionnaire on 100 conveniently selected melasma patients visiting OPD of Sir Ganga Raam hospital Lahore, after getting their informed consent. Ethical approval for the study was granted by Ethical Review Committee of Fatima Jinnah Medical College, Lahore. Data analysis was done via SPSS-18. Descriptive analysis included frequency distribution between variables. The statistical method used was the T-test.

The demographic variables included; Age: 15-54 years, Gender: Male and Female, Marital status: Married, Never married and Divorced/Widowed, Education level: uneducated, matriculation, graduation or above. Treatment options used in the past or being used in present by the Melasma patients i.e. Home remedies, Steroid creams, Fairness creams, Combination of creams, Hakeem, Homeopathy, Beautician, General medical practitioner (G.P), Dermatologist, Chemical peel and LASERs.

RESULT AND DISCUSSION:

The cross-sectional survey was conducted among patients with a mean age of 33.37± 88.089 ranging from 15 to 54 years. As per other demographic variables, female predominance with 98% of the sample being females, 73% being housewives was seen. 82% patients were married. 70% of the patients were educated (matriculation level- 47%, graduation and above- 23%) while 30% were not educated. As per income, 42% patients had an income of less than 100 USD per month, 39% patients lied in income bracket of 100 USD - 200 USD and 19% with income more than 200 USD/ month. Most (89%) of the patients were from the city of Lahore, Pakistan.

The age of onset of melasma ranged from 10-44 years. The results are comparable with that of a study by Achar and Rathi, where in India, the age of onset of melasma was between 11-49 years. [3] In a study by Handel et al, in Brazil, 50% of the females had melasma onset between 20 to 35 years of age. [14] The study also mentioned findings of the literature from Tunisia, where 87% of women had melasma develop at ages between 20 and 40 years. The average age of onset of melasma in our study was found to be 26.42 ± 7.664 years. In India, Singapore and in a global study, the average ages of disease development were higher: 30, 34 and 38 years, respectively. [14] In the study by Achar and Rathi, the mean age of onset was 29.99 years.

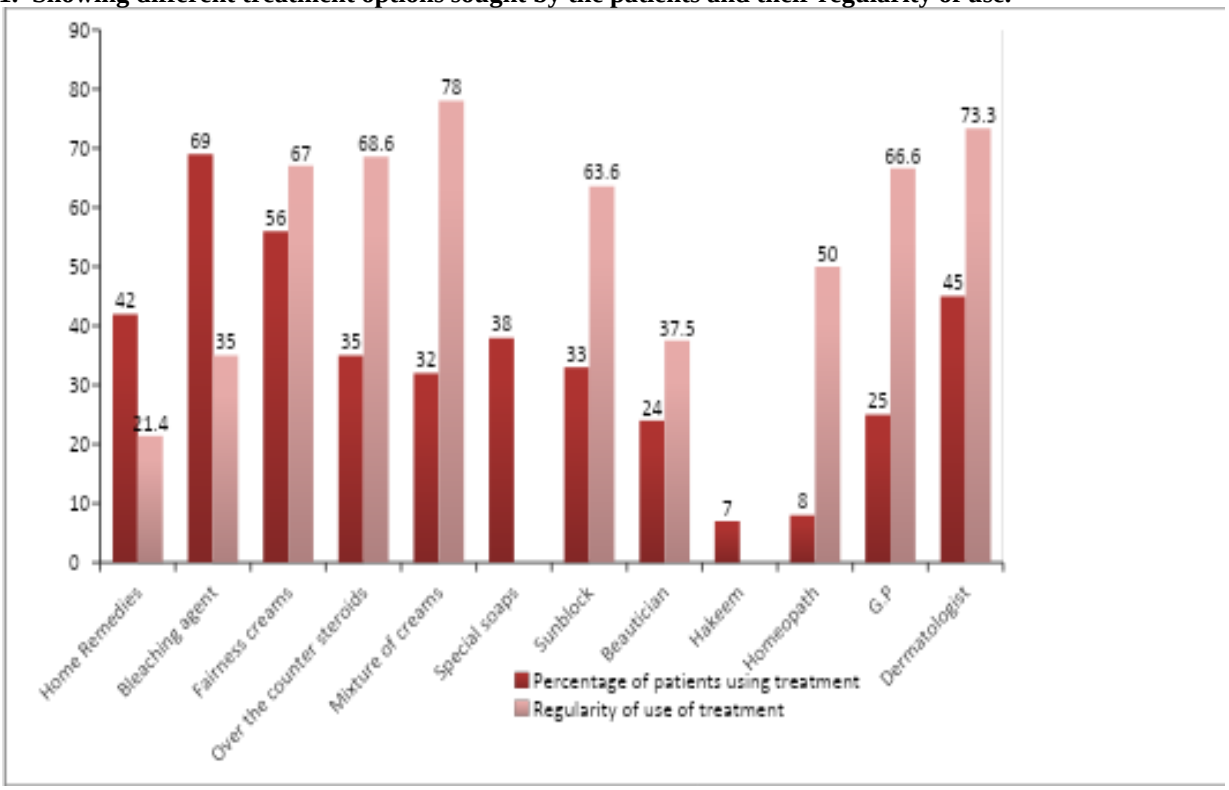
In our study, treatment is referred to as anything the patient considered for treating Melasma, and not necessarily a proven medical treatment, unless specified as one. It was specifically asked out of 100 melasma patients; 14% sought treatment immediately after melasma, 18% after few weeks-months and 32% extended it to years while 32% sought no medical treatment/consultation. Melasma is a chronic condition and most of the population delaying treatment or not treating the condition emphasizes on the fact that most patients do not consider Melasma as a disease to be treated. When treatment was sought table 1 illustrates patient's reasons for seeking different treatment options for melasma.

Table:1 Patient's reason to seek the treatment of Melasma

Reason	Frequency	Percentage
Social pressure	12	12
Took it as a disease to be treated	11	11
Wanted to look good	72	72
Others	10	10

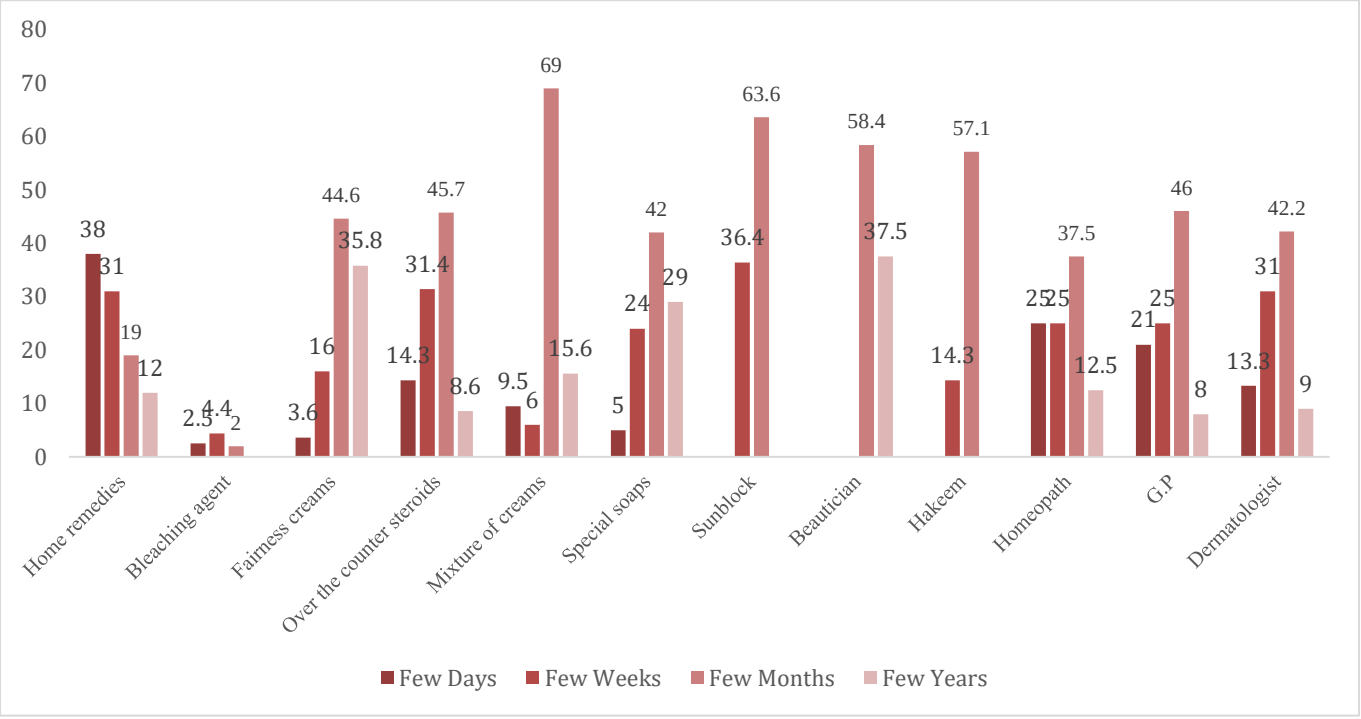
Graph 1 illustrates different treatment options used by patients and regularity of use of a particular treatment option. Regularity was assessed by using dichotomous scale. The treatments most used were bleaching agents (Hydrogen peroxide), then fairness creams and dermatologists ranking third. The dermatologists prescribed topical treatments according to the patients and were consulted years after developing Melasma by most patients. The home remedies, fourth most used treatment modality included gram flour, egg, yogurt, mixture of earlier, milk, honey, Aloe Vera plant, turmeric powder, mint, lemon, banana and orange peel. Home remedies are more common in this part of the world. Their fair use can be due to the fact that they are culturally common, readily available, advertised on media and expertise are not required. They improve the natural tone of the skin by cleansing or bleaching effect. Yet there is no considerable literature proving the home remedies' use to be that effective.

Graph 1. Showing different treatment options sought by the patients and their regularity of use.



Graph 2 demonstrates the approximate duration of a treatment modality used by the patients. Creams (fairness, steroid and mixture), special soaps, Homeopath and Dermatology treatment were amongst those used for a few years. Special beauty soaps were used as a treatment by 38% patients. 44.7% among them used beauty soaps, 13.2% antibacterial soap, 23.7% face washes. A combination of these was also used. Hakeems prescribed edible powders and capsules. Beauticians offered facials which were taken only a few times by the patients while facials are not a medical treatment for melasma. General medical practitioners (G.P) and dermatologists prescribed topical treatments and sunblock was an important part of their prescriptions. Sunscreens protect the skin from actinic damage and Broad spectrum sunscreen with a Sun Protection Factor (SPF) of at least 30 on daily basis are recommended.[8] The use of sunblock is an established to prevent melasma from developing. So the patients' knowledge regarding the importance of sunblock was assessed. 55% of the patients acknowledged the role of use of sunblock for avoidance of sunlight in prevention of Melasma**.** Sun-blocks were used by 33% patients with 63.6% following that regularly.

Graph 2. Showing percentage of patients using different treatments for the duration specified.



Only 2% patients had LASER treatment for one-four times and also 2% patients had chemical peeling thrice. So these new advancements were rarely used by the patients.

Table 2 demonstrates patients' reasons for not complying with any treatment mentioned above, they were following. The most common reason for not being able to comply was the treatment expenses. It is important to note that 42% of the study population had income below 65 USD/ month. Being busy, not bothering at all, ineffectiveness of the treatments and combination of above were the other reasons.

Table 2. Patient's reason for not complying with any treatment for melasma

Variable	Frequency	Percentage
Completed the treatment	15	15
Side effects of topical drugs	11	11
Expenses of treatment	22	22
Long duration of treatment	13	13
Others	39	39

As a limitation, the study was conducted on 100 patients from a confined area i.e. OPD Sir Ganga Ram hospital Lahore and most of the patients belonged to Lahore. Factors influencing a patient's choice of using a particular treatment modality were not determined.

As a recommendation, possible effects, side effects and duration of any treatment modality should be explained to patients to choose the most effective option for them and to comply with that. Studies on more number of patients in a vast locality and on the causative factors influencing the choices of patients should be done to effectively direct the decisions to the path leading to the cure of the disease. Studies for proposing the best option for the treatment of melasma are also recommended.

CONCLUSION:

The average age of onset of Melasma was 26.42 ± 7.664 years. Most of the Melasma patients treat the disease with the motive to look good and most used treatments were bleaching agents and fairness creams. Expenses of the treatment effect patients' choices to choose most used treatment option and affects compliance. Melasma should be discussed as a disease condition rather treatable by dermatology consult.

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