

Frequency and Correlation of Depression in Melasma Patients

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ABSTRACT

Background: Melasma is hyper-pigmentation of skin, usually seen in young female adults, and previous studies have established substantial psychosocial burden associated with this disease.

Aim: To measure the frequency of depression in melasma patients and its correlation with severity of melasma

Study Design: Descriptive cross-sectional study.

Place and duration of study: Dermatology OPD, HIT Hospital Taxila from 1st January 2021 to 31st August 2021

Methods: One hundred consecutive patients of melasma diagnosed by a skin specialist were enrolled. Elderly patients aged >60 years, those with previous psychiatric disease or chronic illnesses and on long term steroids were not included. After getting written informed consent, enrolled patients were screened for depression using Patient Health Questionnaire 9 (PHQ-9)

Results: There were 17 males and 83 females. The mean age was 41.5±8.14 years. On MASI scale for assessing severity of melasma, 38 patients scored mild, 51 scored moderate and 11 scored severe. Using Patient Health Questionnaire 9 (PHQ-9) in patients with melasma, 18 patients didn't have depression, 38 had mild depression, 31 had moderate depression, 6 had moderately severe depression and 7 had severe depression.

Conclusion: The frequency of depression is quite high in patients suffering from melasma. It indicates a need for prompt diagnosis, appropriate intervention at correct time to ensure patient's compliance to therapy to improve his disease outcome.

Keywords: Depression, Melasma, Frequency

INTRODUCTION

Skin is the largest organ of human body and its importance cannot be undermined as it is the most visible of all. A healthy skin is a reflection of one's self image and self-worth and a harbinger of better quality of life.¹ Pigmentary disorders like Melasma, Lichen planus, Vitiligo, Lentigo etc. make up to 3.82% of skin disorders according to recent study in Pakistan.²

Depression is a common illness worldwide with an estimated 3.8% of the population affected, including 5.0% among adults and 5.7% among adults older than 60 years.³ Skin disorders have greater incidence of psychiatric morbidity as compared to normal population. Patients seen in dermatology outdoor present with the complaints that involves high psychological component that include both primary psychiatric disorders and psychiatric disorders secondary to dermatologic pathology as they are concerned with their physical appearance.⁴ Pigmentary disorders of skin like Vitiligo, Lentigo and Melasma negatively affect patient's mood, thoughts, self-esteem, confidence and sense of wellbeing.⁵

Melasma, hyper-pigmentation of skin over sun-exposed areas, has bidirectional cause-effect relationship with depression and stress through psycho-neuro-endocrine pathways. A cross sectional study in India reported 42% of melasma patients to be suffering from depressive illness.⁵ A 2016 Tunisian study on 30 women suffering from melasma had concluded that 16.7% were depressed.⁶ Another study reported 12.8% point prevalence of depression in melasma patients.⁷ A recent study in Pakistan has shown the prevalence of depression to be 10.77% in patients of Melasma.⁸ Melasma has a significant negative effect on Quality of Life affecting self-esteem, causing frustration and embarrassment.⁹

Our study aims to find the frequency of depression in melasma patients coming to the dermatology department of tertiary care hospital and finding correlation between severity of melasma and severity of depression. This will help in timely assessment and management of depression and improving the quality of life and self-esteem in melasma patients and improve the outcomes.

Received on 11-06-2021

Accepted on 22-11-2021

MATERIALS AND METHODS

After obtaining ethical approval from Ethical Committee of HITECIMS, this descriptive cross-sectional study was conducted from 1st January 2021 to 31st August 2021 at Dermatology Outpatient Department of HIT Hospital, a tertiary care setting. A sample of 100 patients of melasma within age range of 18 to 60 years was enrolled. Patients less than 18 or more than 60 years of age, using steroids over long periods, already diagnosed cases of any Psychiatric and chronic illnesses and those not willing to participate or unable to understand the native language were excluded. The participants were clearly explained the objectives of the study and after ensuring about the confidentiality of information obtained, written informed consent was taken from them.

In the stage of data collection, firstly a proforma was used to collect the demographic details and information about past medical and dermatological history of participants. Secondly, a complete examination was performed by Dermatologist to establish clinical diagnosis and severity of melasma using MASI score. A MASI score of less than 8 was considered as mild melasma, 8-16 as moderate melasma and more than 16 as severe melasma. Thirdly, the diagnosis and severity of depression was established by administering Patient Health Questionnaire 9 (PHQ-9). The PHQ-9 is a self-administered 9 items psychometric tool which has been validated for use in hospital settings and assesses severity of depression by indicating score of 5-9 as mild depression, 10-14 as moderate depression, 15-19 as moderately severe depression and 20-27 as severe depression. Data was analyzed using SPSS-26. Mean and standard deviation was calculated for age. Frequencies and percentages were used to calculate categorical variable like gender, prevalence and severity of depression and melasma.

RESULTS

There 17 males and 83 females (Fig. 1). The mean age was 41.5±8.14 years. There were 29 patients who belonged to age group of 18-28 years, 43 who belonged to age group of 29-38 years, 19 who belonged to age group of 39-48 years and 9 who belonged to age group of 49-65 years. As far as level of education is concerned, 34 were under matric, 28 were matriculate, 26 had done FA/FSc pass, 10 were graduates while 2 were post

graduates. Marital status of participants was unmarried for 34 patients and married for 64 patients.

Dermatological examination of skin revealed that 59 patients had type III skin and 41 patients had type IV skin. 21 patients had melasma for less than 12 months, 21 patients had melasma for 1-2 years, 24 patients had melasma for 2-3 years, 17 patients had melasma for 3-4 years and 9 patients had melasma for more than 5 years (Fig. 2).

Thirty eight scored mild on MASI scale for assessing severity of melasma, 51 scored moderate and 11 scored severe. Among the male sample population, out of 17, 6 scored mild, 8 scored moderate and 3 scored severe on MASI scale. Among the 83 female patients, 32 scored mild, 43 scored moderate and 8 scored severe on the MASI scale.

Patient Health Questionnaire 9 (PHQ-9) was administered to diagnose and assess severity of depression in patients with melasma. 18 patients didn't have depression, 38 had mild depression with mean 6.2 (Cut off=9), 31 had moderate depression with mean 11.2 (cutoff =14), 6 had moderately severe depression with mean 16.66 (Cut off=19) and 7 had severe depression with mean 23 (cutoff = 27) according to the PHQ-9 scale (Table 2).

Table 1: The degree of severity of melasma and depression

Tool	Gender	
	Male	Female
PHQ-9 Score		
0-4 (none)	14(16.86%)	4 (23.5%)
5-9 (mild)	33(39.75%)	5(29.4%)
10-14 (moderate)	26(31.32%)	5(29.4%)
15-19 (moderately severe)	5(6.02%)	1(5.88%)
20-27 (severe)	5(6.02%)	2(11.76%)
MASI Score		
Mild: less than 8	32(38.55%)	6(35.2%)
Moderate: 8-16	43(51.80%)	8(47%)
Severe: more than 16	8(9.63%)	3(17.6%)

Table 2: Post-stratification presence of depression on the basis of MASI score in patients (n=100)

Depression on the basis of PHQ-9	MASI score<8: Mild melasma	MASI score 8-16: Moderate melasma	MASI score >16: Severe melasma	No.
0-4(none)	13	5	0	18
5-9(mild depression)	16	22	0	38
10-14 (moderate depression)	8	17	6	31
15-19 (moderately severe)	0	4	2	6
20-27(severe depression)	1	3	3	7
Total	38	51	11	100

Fig. 1: Frequency of gender

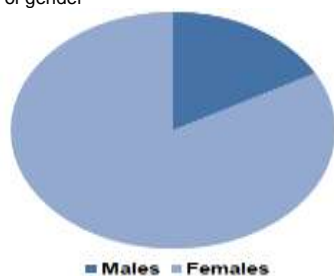
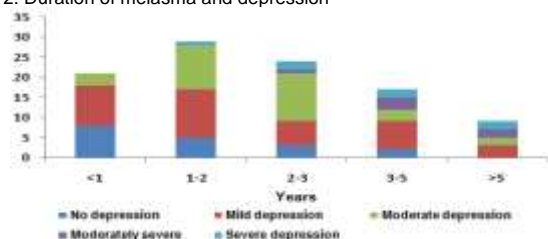


Fig. 2: Duration of melasma and depression



DISCUSSION

Melasma is one of the common and benign pigmentary dermatosis but due to its unappealing nature, it is associated with emotional and psychological problems in the individuals affected by this dermatosis. Patients require professional dermatological treatment but because of discontentment with their appearance, often limit their social activities and can lead to suicidal incidence.¹¹

Melasma does not cause any other symptoms besides skin discoloration but it is of great cosmetic concern. Melasma affects psychological, social and financial domains of a patient's life as well.¹² Melasma can negatively impact many aspects of quality of life including stigmatization, embarrassment and social inhibition, in turn leading to depression and anxiety in the sufferers.¹³ As psychiatric co-morbidity in patients with melasma is very high, dermatologists should aim for a more holistic approach towards the patient and also involve liaison services.

Depression is a highly prevalent disorder that frequently co-occurs with chronic skin conditions. Individuals affected by both pigmentary skin conditions like melasma and depressive disorders concurrently generally show greater levels of functional impairment, reduced quality of life, and poorer prognosis compared with individuals without depression.¹⁴

Many dermatological disorders effect the Health-related Quality of Life (HRQOL). Psychiatric comorbidity and psychosocial dysfunctioning are reported in at least 30% of patients with dermatologic disorders.¹⁵

In dermatology, the effect of melasma on psychological wellbeing is probably the most studied one. Across-sectional survey reported presence of depression among 60% of the 2391 patients of melasma.¹⁶

This study was aimed to assess presence and severity of depression among patients of melasma. The need of the current study was to highlight the importance of magnitude of depression in melasma, for dermatologists, as it can help improve patients' care and prognosis in many ways and it can indicate need for concurrent psychological intervention at correct time to ensure patients' compliance to therapy and to improve his social and psychological behavior and well-being. Results of current study showed that 18 participants had no depression, 38 had mild, 31 had moderate, 6 had moderately severe and 7 had severe depression (a total of 82% patients had depression). These findings are consistent with those in a prospective cross-sectional study involving 100 patients with melasma, ADMH and vitiligo with lesions on exposed body parts conducted in the pigmentary clinic of a tertiary care referral hospital from June 2015 to December 2017. Depression was seen in 12.8%, 27% and 24.1% patients with melasma, vitiligo and ADMH, respectively.¹⁷ These findings are also consistent with Jaiswal et al¹⁰ reported that 84% of the melasma patients were depressed, amongst whom 14% of the melasma patients had severe or very severe depression and 70% of the patients had mild or moderate depression.¹⁰

However, we found different percentages of depression in melasma patients due to variability of sample size, study tool, and data collection in literature. These ranged from 34.96% in Kanish et al⁴, 42% in Deshpande et al⁵, 16.7% in Fatima et al⁶, 12.8% in Dabas et al⁷ and 10.77% in Javaid et al⁸ studies respectively.

Furthermore, in our study females outnumbered their male counterparts by a ratio of 1:6 which is replicated by a study done to evaluate and compare the quality of life in patients suffering from melasma at the Department of Dermatology and Venereology, Tribhuvan University Teaching Hospital from September 2016 to August 2017. It showed that melasma patients had a higher impairment in quality of life.¹⁷

In addition, our study showed that out of 21 patients who had melasma for less than a year, 13 were depressed, out of 29 patients who had melasma for 1-2 years, 24 were depressed, out of 24 patients who had melasma for 2-3 years, 21 were depressed, out of 17 patients who had melasma for 3-5 years, 15 were

depressed and all of the 9 patients who had melasma for more than 5 years were depressed. This concluded that if depressive symptoms are timely picked even at hectic dermatology outdoors and their referral for psychiatric treatment can greatly improve quality of life in these patients.

Unlike Kanish et al⁴ study whereby a statistically significant association of depression was found with age, education and marital status, we didn't find any significant association of depression with age, education and marital status. A 2018 study just like our study findings didn't find any significant correlation between rising MASI scores and severity of depression.⁵ The possible reason could be the administration of tools in dermatology OPD. Had the tool been used in psychiatry OPD or the formal clinical interview based assessment was done the results could have been different.

This will be limitation of our study as well. The sample size could have been increased, the tool PHQ-9 coupled with formal psychiatric interview for assessment of depression may have given different results. Availability of advanced lasers for melasma treatment in dermatology department may have affected patients' responses to queries regarding depression.

CONCLUSION

To conclude, frequency of depression is quite high in patients suffering from melasma. It indicates a need for prompt diagnosis, appropriate intervention at correct time to ensure patient's compliance to therapy, to improve his disease outcome and social and psychological well-being.

Conflict of interest: Nil

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