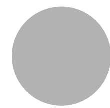

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MELASMA;
QUALITY OF LIFE IN PATIENTS

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ABSTRACT… Introduction: Melasma is an acquired, chronic, recurrent symmetrical hypermelanosis which is characterized by brown patches of variable darkness on sun exposed areas of the body primarily on the face.[1,2] Melasma is more common in Asians and in people who live in locations that receive high intensity UV radiation.[3,4] Melasma is a skin disease that significantly affects social and emotional wellbeing of the patients as well as their Quality of Life (QoL). **Objectives:** To find out the impact of melasmaon quality of life of the patients. **Study Design:** It is a descriptive study and the sample (patients), were selected through convenient sampling. **Place and Duration of study:** The study was conducted in the department of psychiatry & Dermatology department of Bahawal Vicortoria Hospital, Bahawalpur from July to December 2016. **Material and Methods:** Hundred patients having melasma including 11 males and 89 females from both departments were included in the study. Two questionnaires were applied for measuring target variables, these were (i) Dermatology Life Quality Index to assess the effect of melasma on quality of life (DLQI) and (ii) Melasma Area Severity Index (MASI) to determine the severity of melasma. **Results:** The study included 100 patients of which 89 were females while 11 were males. Mean age of the patients was 27$\pm$6. Regarding the educational status of patients, the majority (36%) were graduates and 16% had a Masters degree. Of these patients, 53% were unmarried while 47% were married. Mean DLQI was slightly higher for female patients (13.48) as compared to male patients (12.82). Mean MASI was also higher in females (15.26) as compared to males which was (14.39). **Conclusions:** Melasma causes significant negative impact on quality of life especially in women.

Key words: Quality of Life, Melasma, Melasma Area Severity Index.

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INTRODUCTION

Melasma is an acquired, chronic, recurrent symmetrical hypermelanosis which is characterized by brown patches of variable darkness on sun exposed areas of the body primarily on the face.[1,2] Melasma is more common in Asian, Hispanic and Latin American people who live in locations that receive high intensity UV radiation.[3,4]

The exact etiology of melasma is unknown but various factors like UV radiation, pregnancy, OCPs, genetic influences, phototoxic drugs, and anticonvulsant medications, hormone replacement therapy and thyroid disorders are considered to be major contributory factors. This disfiguring cutaneous disorder can cause significant impact on the psychosocial well-being of patients. Though melasma does not cause major health issues, but can negatively influence the quality of life of affected people especially causing impairment of emotional and social life.

Quality of Life is defined as the general well being of a person or a society in terms of health or happiness.[5] Melasma is a skin disease that significantly affects social and emotional well being as well as the Quality of Life (QoL). Women suffering from melasma report that it affects their social life and emotional well-being, which in turn results in low work capacity and poor personal relations. Although 90% of melasma patients are women, the clinical and histological characteristics are the same in both sexes.

The present study was designed to determine the

impact of melasma on quality of life of patients in Bahawalpur region.

METERIAL AND METHODS

It was a descriptive, non experimental research study, in which scales were employed to assess quality of life in patients of melasma. The sample was collected through hospital based convenient sampling. The study protocol was approved by the Hospital ethical committee. It was conducted in Dermatology and Psychiatry Department of Bahawal Victoria Hospital, Bahawalpur. One hundred patients were included in the study consisting of 11 males and 89 females. A full medical history, clinical assessment of melasma patients and informed consent was taken. Demographic information was collected on a semi structured proforma containing information like subject's name, gender, education, socio-economic and marital status. All the patients were instructed to fill a Dermatology Life Quality Index (DLQI) that included 10 questions covering six different domains of QoL (Appendix- 1). The higher the score on (DLQI), poorer is the quality of life. Patients who did not have formal education were helped by the trained assisting personal of the departments. Data was collected and results were compiled by using descriptive statistics for qualitative and quantitative measurement of variables.

The Melasma Area and Severity Index- MASI (Appendix- 2) were used to evaluate the efficacy of treatment at 4th and 8th week. Patient diagnosed of having systemic causes of pigmentation, on history and examination like SLE, Addison's disease, and liver disease were excluded. Patients who were using de-pigmenting agents, chemical peels and LASER treatment were also excluded.

Statistical package version -20 for social sciences SPSS, was used to analyze the data. Pearson correlation was applied to the variables. Mean, standard deviation and standard error was calculated.

RESULTS

Table-I shows that most of the patients having melasma are between age of 21-25 and 26-30 years of age. After 30 years, concern about melasma gradually reduces as reflected in the table above.

15-20 years	7
21-25 years	32
26-30 years	43
31-35 years	15
More than 35 years	3

Table-I. Age distribution of the patients

Table-II shows that maximum number of patients was having the duration of melasma between 2-3 years and more than 3 years.

Less than 1 year	8
1-2 years	15
2-3 year	32
More than 3 years	45

Table-II. Duration of melasma

Table-III shows total number of patients in which there are11 males and 89 females. The cumulative percentage was 11 and 100 respectively.

Table-IV shows educational status of the patients. Out of these Patients 2% had secondary education, 23% were Matriculate and 23 % had intermediate. 36% and 16% had Bachelor and Masters Degrees respectively.

Table-V refers to the marital status of the patients. According to the results, 47 (47%) patients were married and 53 (53%) were unmarried.

Table-VI shows frequency distribution across socio-economic status. According to results 23 (23%) patients have low socio-economic status and 77 (77%) patients belong to middle class.

Table-VII shows that Dermatology life quality index. Minimum score in males was 8 and maximum was 23 with a mean of 12.82. In females, minimum score was 4 and maximum was 31 with a mean of 13.48 which is greater as compared to males.

Similarly, MASI score is higher in females which again shows more concern of the females about disease.

Table-IX shows correlation among variables. The demographic variable of education is highly correlated with DLQI and MASI, but relationship is negative, it means education increases quality of life and melasma area decreases (Have inverse relation with quality of life), values are -.331** and 0.336** respectively.

Sign* shows significant relationship. Sign**shows highly significant relationship with variables. Similarly, Dermatology quality of life is highly correlated with melasma severity index value is .878**

		Frequency	Percent	Valid Percentage	Cumulative Percentage
Valid	male	11	11.0	11.0	11.0
	female	89	89.0	89.0	100.0
	Total	100	100.0	100.0	

Table-III. Frequency distribution across gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Middle	2	2.0	2.0	2.0
Matric	23	23.0	23.0	25.0
F.A	23	23.0	23.0	48.0
B.A	36	36.0	36.0	84.0
M.A	16	16.0	16.0	100.0
Total	100	100.0	100.0	

Table-IV. Frequency distribution across education

		Frequency	Percent	Valid Percentage	Cumulative Percentage
Valid	married	47	47.0	47.0	47.0
	unmarried	53	53.0	53.0	100.0
	Total	100	100.0	100.0	

Table-V. Frequency distribution across marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	23	23.0	23.0	23.0
	Middle	77	77.0	77.0	100.0
	Total	100	100.0	100.0	

Table-VI. Frequency distribution across socio-economic status

Gender	Variables	N	Min	Max	Mean	Standard Deviation
Male	DLQI	11	8	23	12.82	5.474
Female	DLQI	89	4.0	31	13.48	5.572

Table-VII. Dermatology life quality Index

Gender	N	Min	Max	Mean	Standard Deviation
Male	11	6.8	24.2	14.391	6.168
Female	89	2.5	26.4	15.260	6.104

Table-VIII. Melasma Area and Severity Index (MASI)

	Education	Socio-Economic Status	Dermatology Life Quality Index	Melasma Area of Severity Index
Education	1			
Dermatology Life Quality Index	-.331**		1	
Melasma Area of Severity Index	-.336**		.878**	1

Table-IX. Pearson Correlations

** Correlation is significant at the 0.01 level (2-tailed).

Results prove that as the severity of melasma increases, quality of life decreases thus proving a significant relationship between the severity of melasma and quality of life.

DISCUSSION

Melasma is a chronic disease of skin pigmentation that manifests as symmetrical macules and patches of hyper pigmentation primarily on the face that varies in severity from one patient to another.[6] The management of melasma is challenging and requires long-term treatment. It causes considerable psychological impact on the patients subsequently leading to poor quality of life. In our study, we use the Dermatology Life Quality Index to assess the impact of melasma on the suffering patients. In Dermatology, it was difficult to assess disease severity in the past but now various scoring system are being validated to measure the diseases out come. Melasma Area Severity Index (MASI) is the predominant outcome measure in melasma.[7] Our study also explores the relationship between quality of life and melasma.[4]

In our study, it is seen that the percentage of affected females is much more i.e. 89% as compared to males i.e. 11%. The main reason behind this is that females are more concerned about their physical appearance and melasma mainly affects the face and exposed parts of their body leading to cosmetic disfigurement. Among the demographic variables, melasma is more prevalent in of females as compared to males. It correlates with many studies that also show that females are more concerned about their physical appearance.[8,9] In a national study conducted by Ali et al,[10] it was proved that female preponderance (82%) is high in melasma as compared to males(18%). It also correlates well with the study from New Delhi which shows 79.5% females as compared to 20.5% males were having melasma.[7] This could be attributed to the fact that melasma is more common among women because female hormonal activity is considered one of the most important causative factors.

Regarding education status and quality of life, we found that there is a negative co-relation i.e. higher the education, better is the quality of life. But socio economic status highly correlates with DLQI+MASI. The poor the socio economic status, poorer is the quality of life and higher is the MASI. This finding correlates with the study conducted by Yalamanchili etal.[11] The recorded DLQI in our study 12.82 was higher females it is 13.48 because females are psychologically more prone to negative remarks and emotional reactions. Since Melasma is commonly a recurring problem, long term treatment and remission and relapses lead to poor quality of life and low self esteem. Which coincides with most of the studies[12,13] but it did not correlate with a study by farag etal.[14] The reason for this difference may be environmental and also may be due to the fact that most of the our patients are outdoor workers, and are more exposed to UV radiation.

Melasma area and severity index is higher females in our study is similar to the study by Safizade et al.[5] DLQI and MASI have significant relationships which is also reported by studies by national and international studies.[10,16] these findings are in accordance with the study conducted by Ali et al[10] where the results were if the patients had melasma for a longer duration of time they had a poorer QoL. The mean duration of melasma in our study was 3 years $\pm$6 months. Study carried out by Dominguez et al.[13] demonstrated that QoL is more impaired in cases with long-standing disease. The most adversely affected domain of QoL in Ali et al[10] study was the feelings of patients related to embarrassment and self-consciousness, personal relationships of patients were affected and forcing them to avoid social interactions with close friends, relatives or partners. In addition, the disease also influenced the choice of clothes that was more prevalent in females. Our study is supported by the findings of Balkrishnan et al[12] that the emotional well-being was reported to be one of the most adversely affected life domains affected by melasma.

CONCLUSIONS

Our study concludes that women suffering from melasma have poor quality of life especially unmarried females as compared to males. It causes considerable psychological impact on the

patient's well-being, lower self-esteem leading to poor quality of life.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Naima Luqman	Introeuction and literature review, analysis of result, disccsion and conclusion of resltus preparation of manuscript for submission.	
2	Wajid Ali Akhunzada	Review of manuscript for submission.	
3	Asima Luqman	Expert research opinion and experience in finalizing the manuscirpt.	
4	Muhammad Khalid	Drafting and interpreting data	
5	Sultana Jam	Help in collection of data.	