

Evaluation of Quality of Life in Males with Melasma Using Melasma Quality of Life Scale (MELASQOL)

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Author's Contribution

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ABSTRACT

Objective: To evaluate the melasma quality of life (MELASQoL) scoring amongst the pre-diagnosed patients of melasma.

Methodology: The cross-sectional study was conducted at (Tertiary Care Hospital, Gujranwala) from September 2022 to February 2023. 150 adult male patients were selected. Melasma severity was evaluated using the melasma quality of life (MELASQoL) scale. Chi square test was used for association of MELASQoL score with socioeconomic status, education, ethnicity and duration of melasma. A p-value < 0.05 was considered significant.

Results: Patients' socioeconomic level and duration of melasma were compared. Paired sample chi square test demonstrated significant scores between urdu speaking, sindhi, Punjabi, Balochi and pathan with urdu speaking and sindhi had significant association with MELASQoL score (p<0.01). The duration of melasma was compared to MELASQoL scores. One, two, and more than two years of melasma were scored significantly (p<0.05). Patients with melasma for more than two years had a considerably lower quality of life (p<0.05).

Conclusion: Male melasma patients showed a significant decline in quality of life similar to female patients. As they counsel patients and devise management measures, healthcare providers must be aware of the impact of melasma on psychosocial health as well.

Keywords: Melasma, MELASQoL scale, socioeconomic status, quality of life, facial melanosis, psychosocial health, males, ethnicity

Introduction

Pigmentary disorders are conditions that alter the color of skin by causing either a decrease or an increase in the amount of pigment. Melasma, Riehl's melanosis, idiopathic guttate and confluent hyper melanosis, lichen amyloidosis and nevus of Ota are some of these hyper pigmentary disorders in adults.¹ Melasma most commonly affects the areas of the face that are most frequently exposed to the sun, such as the forehead, cheeks, nose, and upper lip. People with Fitzpatrick skin types III to V, Latinos and Asians are more likely to be affected.² Ultraviolet radiation, genetic makeup, hormonal preparations, phototoxic drugs, dysfunction of the ovary or thyroid, and cosmetics, have been identified as potential risk factors of pigmentation disorders. However, exact pathophysiology has not been established to its full extent.

The hyperpigmentation caused by melasma is often resistant to treatment. A wide variety of therapeutic choices are available.^{3,4} The Kligman regimen triple combination for melasma is the oldest therapy. It consists of a medium-potency

corticosteroid, retinoid, and hydroquinone. Other treatments, such as Arbutin, chemical peels, microdermabrasion, and laser treatment have shown some efficacy but are not considered first-line therapies.^{5,6} Melasma affects psychosocial quality of life. The measurement of a patient's quality of life is becoming an increasingly important component of the comprehensive assessment of a patient's health since it offers a more in-depth perspective on the patient's current state of health.^{7,8}

Scales like Melasma Area and Severity Index (MASI) and Dermatology Life Quality Index (DLQI), equally emphasize the impact of dermatological diseases to physical and psychological wellbeing. On the other hand, the SKINDEX-16 assess skin color differences and its impacts on patients' psychological and social aspects.^{9,10} Melasma Quality of Life (MELASQoL) scale, also emphasize on psychosocial factor. The new scale accurately reflects seriousness of the disease. The MELASQoL consists of ten questions with response options ranging from 1 (not

bothered at all) to 7 (always disturbed); a higher score leads to a lower quality of life. These domains of SKINDEX16, DLQI, and MELASQoL has a high level of internal consistency.¹¹ MELASQoL, a subjective rating system, is a practical tool to estimate the effect of melasma on QoL and assess treatment outcome with psychosocial wellbeing.¹² Published literature on melasma quality of life has been conducted with female preponderance. There is dearth of literature on quality of life in males effected by melasma.¹³ Present study aims to assess effect of melasma using MELASQoL in males. The study will further find impact of different parameters of MELASQoL on quality of life in males.

Methodology

A cross-sectional study was conducted at the Department of Dermatology, Tertiary Care Hospital, Gujranwala from September 2022 to February 2023. Hospital Ethical Review Board approved the study (ERB Cert No 20-2023). A sample size of 150 Melasma male patients, were calculated with calculator.net, 95% confidence interval, 5% margin of error, prevalence of 10%.¹⁴

Patients with systemic diseases such as systemic lupus erythematosus, Addison's disease and hemochromatosis and those with contact dermatitis were excluded. All patients were evaluated by MELASQoL. Patients who could not read were aided by a resident physician who read the instrument aloud and noted their responses. Ten questions comprise the MELASQOL. All questions are graded on a scale from 1 (bothered all time) to 7 (not bothered at all). Total score of MELASQoL is graded as low (1-25), intermediate (26-50), high (51-70).

The data were analyzed with SPSS 20.0. Frequency, percentage were calculated for demographic characteristics of marital and socioeconomic status, education, ethnicity, and duration of melasma. Chi square test was used for association of MELASQoL score with socioeconomic status, education, ethnicity and duration of melasma. A p-value < 0.05 was considered significant.

Table II: Quality of life with MELASQoL in Male Melasma Patients.

Variables	MELASQoL score		P-value
	Severely impaired	Moderately impaired	
Ethnicity			
Urdu speaking	33	21	0.065
Punjabi	8	9	
Sindhi	27	39	
Balochi	5	2	
Pathan	1	5	
Socioeconomic status			
High	5	7	0.314
Middle	40	48	
Low	29	21	
Marital status			
Married	13	15	0.733
Unmarried	61	61	
Duration of melasma			
1 year	36	22	0.014
2 years	34	45	
Education			
Not educated	10	6	0.471
primary	8	4	
Secondary	7	6	
intermediate	19	22	
graduation	30	38	

Results

One hundred and fifty male participants were included in this study. Age ranged from 15 to 55 years, mean 37.2 SD±7.6 years. Demographic data of the participants is as in Table I.

Table II showed significant association of MELASQoL scale with duration of melasma (p<0.05). Whereas it had insignificant association with marital status, ethnicity, socioeconomic status and education (p>0.05)

Table I: Demographic Characteristics of Male patients with Melasma.

Demographic characteristics	Total (n)	Frequency (%)
Marital Status		
Married	28	17.7
Single	122	77.2
Socioeconomic status		
Low	88	55.7
Middle	50	31.6
High	12	7.6
Education		
None	16	10.1
Primary	12	7.6
Secondary	13	8.2
Intermediate	41	25.9
Graduation	68	43
Ethnicity		
Urdu	54	36.0
Punjabi	17	11.3

Sindhi	66	44.0
Balochi	7	4.7
Pathan	6	4.0
Duration of Disease		
One year	58	36.7
Two Years	79	52.7
>two Years	13	8.7

Discussion

Health related quality of life (HRQOL) is a multidimensional assessment that comprises of 3 main spectrums- physical, psychological and social wellbeing- that are influenced by disease /and or in management. Megari K. et al in study of health-related quality of life emphasizes that chronic diseases worsen overall quality of life. Our finding indicates that QoL is more compromised in patients with chronic disease.¹⁵ In a study conducted by Han K-T et al, in Korea, describes no difference in QoL of melasma patients irrespective of marital status, our results show unmarried melasma patients had lower quality of life than married individuals but statistically, quality of life is equally affected in both married and unmarried people.¹⁶ This is related to cultural attributes, as patients with melasma may experience difficulty in getting married. In our study socioeconomic status and disease duration were most common attributes in melasma patients. The parameter of relationships, shows that melasma patients avoid social engagements with close friends, family members, or partners. Jiang J. et al in a qualitative inductive study of six females of multi ethnicity, has similar results, describes melasma negatively impacts aspects of self -esteem, freedom and emotional well-being.¹⁷ In addition, patients with melasma finds themselves unattractive and this affects interpersonal relationships.

Present study concluded that ethnicity has significant association with MELASQoL score, as melasma patients of sindhi and urdu speaking background had worse MELASQoL score. Similar to Sarkar R. et al, with conclusion that ethnicity has stronger association with quality of life, as darker skinned people are more prone to develop melasma.¹⁸ Turkman H. et al and Polo CF. et al demonstrated that Quality of life in melasma patients is influenced by age, level of education, socioeconomic status and duration of melasma.^{19,20} Our study concluded that quality of life of people belonging to any socioeconomic class, and of any

educational level is, equally affected with melasma. However, those suffering from melasma more than 02 years had worse quality of life scoring. In contrast, Zhu Y. et al concluded that quality of life in melasma patients is not influenced by age of patient, educational status and duration of melasma.²¹ Previously, it believed that females are more effected by melasma because of their hormonal activity as causative factor and are more concerned about their physical appearance and social wellbeing as demonstrated by Akhunzada WA. et al.²² Present study concluded that males are equally affected with melasma and are equally concerned about their physical appearance and social relationships. This may be due to their prolonged sun exposure, their outdoor jobs, less use of skin protective measures. Effect of melasma on quality of life in both genders, of all socioeconomic classes, in skin of color is attributed to more social awareness, concern and social position. Due to increase social awareness and electronic media, people are more concerned about their physical appearance and that impacts their quality of life.

Present study stresses on impact of quality of life on burden of patient's skin condition. So, apart from clinical severity of disease, quality of life should be evaluate to assess the burden of disease and so well to plan the treatment strategy.²³

Conclusion

This research evaluates the meslasma quality of life (MELASQoL) scoring amongst the pre-diagnosed patients of melasma. The Melasma causes as significant negative impact on QoL in males as in females. Hence, MELASQoL should be assessed in every male patient of melasma and treatment plan should include counselling and appropriate psychological intervention for male patients as well.

This was a small regional study with relatively small sample size. And currently there is a dearth of literature on quality of life in males with melasma. It is necessary to do additional research using large sample size and investigate the elements that influence the quality of life of melasma patients, causative factors of melasma in males and effect of treatment on quality of life.

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