ABSTRACT: To determine the impact of Melasma on patient’s quality of life using life quality index “Melasma quality of life scale.” A cross sectional study was carried out at dermatology departments of Mayo, Services, and Shalimar hospitals of Lahore city. 160 patients, aged 16-55 suffering from Melasma were enrolled in the study. Using the Melasma quality of life scale questionnaire, consisting of 10 questions. Patients were asked to score on a scale from 1-7 for each of 10 items. The data were analyzed after compiling the results. The higher the Melasma quality of life scale) score, the poorer is the quality of life. Mean age of the patients was $30.5 \pm 7.694$ years. The mean Melasma quality of life scale score was $55.62 \pm 12.3444$. The finding indicates several areas in which Melasma had an impact on individual’s quality of life, particularly in relation to symptoms, feelings, and personal relationships. Melasma has an adverse effect on patient’s quality of life. It has observed that embarrassment and family relationship are badly affected domains of patient’s quality of life. It was concluded that Melasma has an adverse effect on patient’s quality of life. It is needed to encourage patient or enhance the educational training and suitable psychological therapies to attain a complete and effective management.

Keywords: Melasma, Quality of life, MELASQOLS

INTRODUCTION

The word melasma comes from Greek word “Melas” (black). It is referred to as ‘Chloasma’ when it occurs during pregnancy. Melasma is a skin disorder, a psychological distressing of the skin, which causes patchy brown discoloration that mostly appear on face and sun exposed areas (Moin et al., 2006). Melasma is a very common disorder, mostly in young women who take oral contraceptives or hormone replacement therapy medications, but it can affect anyone (Jadotte and Schwartz, 2010). The brown discoloration is due to over production of melanin, (a natural element that gives color to our hair, skin and eyes)(Moin et al., 2006). In most countries, the reason for the widespread of Melasma is unknown; however, it is a known factor that Melasma is found 10% in males and 90% in females, because of hormone-related reasons like pregnancy and use of birth control pills (Jadotte and Schwartz, 2010). So far, the exact cause of melasma is unknown. However, researchers have determined multiple factors, which increase the risk of melasma. While these factors are not direct causes, they do increase the chance of developing melasma, are known as risk factors, and are defined as the factors responsible to enhance the development of disease in person. Some of these expected risk factors are Pregnancy, Ultraviolet light, oral...
contraceptives, genetic predisposition, cosmetic ingredients, hormone replacement therapy, phototoxic drugs and thyroid autoimmunity (Kang et al., 2002).

Quality of life (QOL) is the aptitude of a person’s daily activity applicable to his/her age and role in the society[Adalatkan and Amani, 2007]. All human especially females are very conscious of their facial appearance. Any unwanted mark, deformity or blemish like Melasma can severely hurt their ego and self-esteem, and has negative effect on their quality of life (Balkrishnan et al., 2003). The present study was conducted to assert on the effect of melasma on the QOL of a person with the help of a QOL index. There are many indices, Dermatology Life Quality Index (DLQI), Skindex 16, Melasma Quality of life scale (MELASQOL), etc., are available in questionnaires form to measure the degree of incapacity due to skin diseases. However, Melasma has a greater influence on psychosocial instead of physical aspects of a patient’s life (Ali et al., 2013).Objective of the present study is to define the influence of Melasma on patient’s quality of life using Melasma Quality of Life Scale (MELASQOL).

MATERIALS AND METHODS

The target population of the study was the dermatology OPD patients coming to public hospitals of Lahore and sampled population was the patients who come to be diagnosed melasma on expose areas especially on face. The study was conducted during September 2013 to March 2014 and the sample of 160 patients was selected from the following hospitals, Mayo Hospital, Services Hospital, and Shalimar Hospital.

A questionnaire was developed with the help of the dermatology consultants of Mayo Hospital Lahore to collect the information from both, the cases and the controls. Questionnaires were filled in by the researcher in a face to face interviewing process. Only female patients with age ranged between 16 to 45 were included in this study. The data was collected in different visits from different outdoor patients of dermatology skin departments from the hospitals under study. MELASQOL is a validated and an effective questionnaire to assess the psychosocial aspect of Melasma, by Balkrishnan et al (2003). All patients were asked to fill a MELASQOL questionnaire that comprised of 10 questions covering different areas of QOL e.g. symptoms and feeling, family relationship, emotional well-being, sexual relationships, recreation leisure. The patients were asked to score on a Likert scale from 1-7, 1: strongly not bothered, 2: not bothered, 3: somewhat not bothered, 4: some time bothered and sometime not bothered, 5: somewhat bothered, 6: bothered, 7: bothered all time.

The score ranged between 7 and 70. The higher score indicated poorer quality of life. The data were analyzed through SPSS version 16.0. The factors were included in the study were age, and MELASQOL score. MELASQOL scale description (Balkrishnan et al. 2003). On a Likert scale of 1 (not bothered at all) to 7 (bothered all the time), the subject rates how she feels about the appearance of your skin condition.

1. Frustration about your skin condition
2. Embarrassment about your skin condition
3. Feeling depressed about your skin condition
4. The effects of your skin condition on
your interactions with other people (e.g. interactions with family, friends, close, relationship, etc.)

5. The effects of your skin condition on your desire to be with people

6. Your skin condition making it hard to show affection

7. Skin discolorations making you feel unattractive to others

8. Skin discolorations making you feel less vital or productive

9. Skin discolorations affecting your sense of freedom

**RESULTS**

In this research, we studied the case history of 160 Melasma patients. Their mean age was (30.58 ± 7.694) years. 121 cases were married and 39 unmarried. Most of females were not working. They were mostly housewives and belonged to poor class family. They faced excessive sun exposure during their household chores like gardening and washing. According to the pattern of Melasma 95 (59.375%) were Centrofacial, 42 (26.25%) Malar, 23 (14.375%) Mandibular. Patients having 3 months disease history were 17 (10.625%), 3-6 months were 17 (10.625%), 7-12 were 23 (14.375%), 13-24 months were 17 (10.625%) and > 24 months were 86 (53.75%). Mean score of MELASQOL scale was 55.62 ± 12.344.

![Fig 1: Mean MELASQOL scores for each of the 10 questions.](image)

Fig 1 revealed that the highest score was determined for question number Q3 (5.93 ± 1.559) related to feeling of patients followed by Q8 (5.89 ± 1.703) related to feel unattractive, Q2 (5.88 ± 1.560) related to Frustration, and Q5 related to personal relationship. The comparison between MELASQOL means scores and different age groups were done (Table 1) and significant difference was seen (Table 2). According to Kendall’s tau-b (Table 3), as age increases mean score decreases.

<table>
<thead>
<tr>
<th>Age-gp</th>
<th>Score-gp</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>21-30</td>
</tr>
<tr>
<td>16-25</td>
<td>1</td>
</tr>
<tr>
<td>26-35</td>
<td>0</td>
</tr>
<tr>
<td>36-45</td>
<td>0</td>
</tr>
<tr>
<td>46-55</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 1: Age-group & MELASQQL mean score Cross tabulation**
It was observed in this study that QOL was less disturbed by Melasma in affected age group of 46-55 years, in agreement with the results of Balkrishanan et al. (2003). Where QOL was also observed less affected in the same. It was observed that the MELASQOL mean score was higher in the age group 26-35 in comparison to other age-groups.

In this study, the patients suffered from Melasma for a longer period of time had adverse effect on QOL. Same results were carried out in the studies of Dominguez et al. (2006); Ali et al. (2013) which determined that QOL was more worsened patients with long duration of disease.

In this study mean MELASQOL score is 55.62 while in previous study, by Balkrishanan et al. (2003). was found to be 36. The difference can be described by the fact that in this study mostly patients belonged to poor class family, where psychosocial effect of Melasma was higher.

In this present study, the most badly affected life area feeling of patients linked to embarrassment represented by the largest MELASQOL mean score for question No .3 . The second largest affected life area was self-consciousness and then personal relationship of patients insisting them to avoid social interactions with close friends, relatives or partner. Comparable to our study, emotional well-being was reported to be one of the most adversely affected life domains due to Melasma, by Balkrishnan et al. (2003).

The present study suggested that a blemishing facial mask like Melasma that postures an adverse effect on patient’s QOL. It

---

**Table 2: Chi-Square Test**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear-by-Linear Association</td>
<td>6.416</td>
<td>1</td>
<td>.011</td>
</tr>
<tr>
<td>No. of Valid Cases</td>
<td>160</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: Symmetric Measures**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Approx. significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Kendall’s tau-b</td>
<td>-</td>
<td>0.167</td>
</tr>
<tr>
<td>Ordinal</td>
<td></td>
<td>.020</td>
</tr>
<tr>
<td>No. of Valid Cases</td>
<td>160</td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION**

Melasma is a skin disease that displays as irregular macules and patches of hyperpigmentation predominantly on the face. This long-lasting and recurring situation causes an adverse effect on many areas of patient’s QOL.

In this study, patient’s mean age was 30.58 ± 7.694 years, which is accordance to the results of Ali et al. (2013). Previous studies showed the mean age between 36 to 40 years. This difference is because of social, racial and cultural, difference around the world. In our culture, most marriages are held at the age of 20-30 years. This makes people conscious to consult and get advice earlier about their disease.
is needed to encourage patient or enhancement of educational training and suitable psychological involvement to attain a complete and effective management.

CONCLUSION

It is concluded that Melasma has an adverse effect on patient’s QOL. It has been observed that embarrassment and family relationship are badly affected domains of patient’s QOL. From the findings of the study, the following suggestions are recommended:

- There could be reasonable precautionary measures to stop Melasma from developing. These measures include protection from the harmful sunray (UVR). This protection can be ensured by avoiding unnecessary sun-exposure especially between 7 Am to 7 Pm and further strengthening this protection by covering the face, wearing a wide hat, use of umbrella and application of a sunscreen product with SPF 30-60, at least half an hour before going out door. A well balanced diet, proper hydration and avoiding stress may also help.

- The present study showed that a blemishing facial mask like melasma that reflects an adverse effect on patient’s QOL, it is needed to encourage patient or enhance the educational training and suitable psychological therapies to attain a complete and effective management.

ACKNOWLEDGEMENT

I am thankful to Dr. Shahbaz Aman, Associate Professor of Dermatology (Mayo Hospital) and all other members for their help and guidance to conduct this paper.

REFERENCES


