doi: 10.53446/actamednicomedia.1361394

Acta Medica Nicomedia

Cilt: 6 Sayı: 3 Ekim 2023 / Vol: 6 Issue: 3 October 2023
https://dergipark.org.tr/tr/pub/actamednicomedia

Research Article | Araştırma Makalesi

EVALUATION OF QUALITY OF LIFE AMONG TURKISH WOMEN WITH HIRSUTISM: A CROSS SECTIONAL STUDY

HİRSUTİZMLİ TÜRK KADINLARDA YAŞAM KALİTESİNİN DEĞERLENDİRİLMESİ: ÇAPRAZ KESİTSEL ÇALIŞMA

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ABSTRACT

Objective: A variety of studies documented impaired quality of life among patients with hirsutism. The perceived normal or acceptable levels of body hair depends on the ethnic origin and woman's perception of familial, cultural and society norms regarding number and distribution of hair. Therefore, the impact of hirsutism on quality of life may be different across societies. The aim of our study is to examine the quality of life in patients with hirsutism among Turkish women using Dermatology Life Quality Index (DLQI) assessment.

Methods: Forty patients (mean age: 21.40±6.98 years, range: 16-40) diagnosed with hirsutism according to modified Ferriman-Gallwey (mFG) scoring system were included in the study. DLQI questionnaire, developed to evaluate the impact of dermatologic diseases on quality of life, was administered to patients. DLQI scores of patients with hirsutism were compared to a control group of 18 patients without hirsutism (mFG score <8).

Results: The average DLQI score was 8.83± 5.66 (median=8, range= 0-25). The mean mFG score in patients with hirsutism was 17.18±7.64 (median 15.5, range= 8-36). There was no significant association between mFG score and DLQI (rs=0.12, p=0.44). There was a statistically significant difference between mean DLQI scores of patients with hirsutism and control group (p<0.01). Eight (20%) patients had a diagnosis of polycystic ovary syndrome. Thirty (75%) patients had at least one of the findings of hyperandrogenemia including acne, androgenetic alopecia, seborrhea, menstrual irregularity and acanthosis nigricans.

Conclusion: Hirsutism is associated with impaired quality of life among Turkish women, independent from mFG scores.

Keywords: Hirsutism, quality of life, quality of life in hirsutism, dermatology life quality index

ÖZ

Amaç: Hirsutizmin yaşam kalitesi üzerine olumsuz etkisine dair literatürde yayınlanmış çeşitli çalışmalar mevcuttur. Tüylenmenin normal veya kabul edilir düzeyde olması; etnik kökene ve kadının kıl sayısı ve dağılımı açısından ailesel, kültürel ve toplumsal normları algılamasına bağlıdır. Bu nedenle hirsutizmin yaşam kalitesi üzerine etkisi toplumlar arasında farklılık gösterebilir. Çalışmamızın amacı, kliniğimize başvuran hirsutizmli Türk hastalara Dermatolojik Yaşam Kalite İndeksi (DYKİ) anketleri uygulanarak hastaların yaşam kalitelerinin nasıl etkilendiğini araştırmaktır.

Yöntem: Modifiye Ferriman-Gallwey (mFG) skorlamasına göre hirsutizm tanısı alan 40 hasta (ortalama yaş: 21,4±6,98, ranj: 16-40 yaş), çalışmaya dahil edildi. Hastalara dermatolojik hastalıkların yaşam kalitesi üzerine etkisini değerlendirmek için geliştirilen DYKİ anketi uygulandı.Hirsutizmli hastaların DYKİ skorları, hirsutizmi olmayan (mFG skoru<8) 18 hastadan oluşan kontrol grubu ile karşılaştırıldı.

Bulgular: Ortalama DYKİ skoru 8,83± 5,66 (medyan=8, ranj= 0-25), ortalama mFG skoru 17,18±7,64 (medyan 15,5, ranj=8-36) bulundu. mFG skoru ile DYKİ skoru arasında anlamlı bir ilişki izlenmedi (rs=0,12, p=0,44). Hirsutizmi olan ve olmayan hastaların ortalama DYKİ skorları arasındaki fark anlamlı derecede idi (p<0,01). Sekiz (%20) hasta polikistik over sendromu tanısı almıştı. Hastaların 30' unda (%75) akne, androgenetik alopesi, sebore, menstrüel düzensizlik ve akantoz nigrikans gibi hiperandrojenemi bulgularından en az bir tanesi mevcuttu.

Sonuç: Hirsutizm,Türk kadınlarında mFG skorlarından bağımsız olarak hastaların yaşam kalitesini etkileyen önemli bir sorundur.

Anahtar Kelimeler: Hirsutizm, yaşam kalitesi, hirsutizmli hastalarda yaşam kalitesi, dermatolojik yaşam kalite indeksi

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Submitted/Başvuru: 16.09.2023 • **Accepted/Kabul:** 16.10.2023 • **Published Online/Online Yayın:** 21.10.2023

Introduction

Hirsutism is defined as excessive and male pattern growth of terminal hairs in females in androgen sensitive areas including upper lip, chin, chest and back.[1] It affects 5%–15% of women of reproductive age and associated with hyperandrogenemia in 70-80% of cases.[2] Modified Ferriman-Gallwey (mFG) scale is used for the evaluation of hirsutism. Patients with a total score of 8 or more are diagnosed with hirsutism accordingly.[3,4]

Hirsutism is associated with psychological distress, difficulties in social life and psychological morbidities such as anxiety and depression.[5,6] A variety of studies on quality of life in patients with hirsutism are available in the literature.[6-19] However, only one study was published among Turkish population.[7]

Perceived normal or acceptable levels of body hair depends on the ethnic origin and woman's perception of familial, cultural and society norms regarding number and distribution of hair.[20] Therefore, impact of hirsutism on quality of life may be different across societies.

The aim of our study is to examine the quality of life in patients with hirsutism among Turkish women using Dermatology Life Quality Index (DLQI) assessment.

Methods

From January 2021 to July 2021 a total of 58 female patients, aged between 16 and 64 years (mean: 24.97±10.68)) consulted our clinic for the evaluation to undergo laser hair removal. Forty patients (mean age: 21.4±6.98 years, range: 16-40) diagnosed with hirsutism according to mFG scoring were included in the study. Patients with hypertrichosis, receiving any medication to control the hair growth, younger than 16 years of age, performed hair removal procedures (laser, waxing, shaving, etc.) within the last month, failed to complete the questionnaire, reluctant to participate the study, and diagnosed with other dermatological diseases which might interfere with the quality of life were excluded.

mFG scoring system is a visual scoring method for the assessment of androgen sensitive hair growth in 9 body areas (upper lip, chin, chest, upper and lower back, upper and lower abdomen, thighs, and upper arms).[3] Each area is visually graded from 0 to 4 and the total score is calculated as a sum of all areas. A total score of 8 or more is considered hirsutism. The severity of hirsutism is classified as follows: mFG scores of 8-16 are considered as mild, 17-24 are considered as moderate and 26-36 are considered as severe.[3] To eliminate inter-observer variability, one dermatologist (ŞSG) performed the evaluation and quantification of hirsutism.

DLQI questionnaire, developed by Finlay and Khan to evaluate the impact of dermatologic diseases on quality of life, was administered to patients. DLQI consists of 6 domains (symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment) and 10 questions that assess patients' perception of the impact of a dermatologic condition on their quality of life over the last week.[21] DLQI is a 4-point Likert scale, and each question is scored as: 0 (not at all), 1 (a little), 2 (a lot) and 3 (very much) to yield a total score of 0–30. Higher scores indicate greater impairment of the quality of life. The average DLQI score is 0-0.5 in normal population. DLQI scores are interpreted as follows: 0-1:no effect at all, 2-5: small effect, 6-10: moderate effect, 11-20: very large effect, and 21-30: extremely large effect on patient's life.[22]

Demographic data (age, marital status), accompanying signs of hyperandrogenemia (menstrual irregularities, acne, seborrhea, acanthosis nigricans, androgenetic alopecia), consultation notes (endocrinology and gynecology), laboratory tests, medications and diagnoses were recorded.

Additionally, DLQI scores of patients with hirsutism were compared to a control group of 18 patients without hirsutism (mFG score <8).

Our study was conducted in accordance with the medical ethics of the Declaration of Helsinki and approved by Haliç University Ethical Committee (Date: 27/5/2021, Approval number: 113).

Statistical Analysis

Descriptive statistics, including mean, SD, lowest, highest, frequency, and percentage values, were used to analyze the data. The association between hirsutism and quality of life was evaluated by Spearman correlation test. Independent t-test was used to compare DLQI scores of patients and control group.

Statistical significance was set at $P<0.05$. Data were analyzed using SPSS version 20.0; (IBM Corp., Armonk, New York, US).

Results

The mean age of the 40 patients enrolled to the study was 21.4±6.98 years (range= 16-40). Eight patients (20%) had a diagnosis of polycystic ovary syndrome. Thirty (75%) patients had at least one of the findings of hyperandrogenemia including acne, androgenetic alopecia, seborrhea, menstrual irregularity and acanthosis nigricans.

The average DLQI score was 8.83±5.66 (median=8, range= 0-25). The impact of hirsutism on quality of life was extremely large (DLQI: 21-30) in 1 (2.5%) patient, very large (DLQI: 11-20) in 13 (32.5%) patients, moderate (DLQI: 6-10) in 13 (32.5%) patients and small (DLQI: 2-5) in 9 (22.5%) patients. Life quality was not affected in four (10%) patients.

The mean mFG score in patients with hirsutism was 17.18±7.64 (median 15,5, range= 8-36). Mild, moderate and severe hirsutism were diagnosed in 22 (55%), 10 (25%) and 8 (20%) patients, respectively. There was no significant association between mFG score and DLQI ($r_s=0.12$, $p=0.44$).

When the contribution of subdomains to total DLQI score was examined in detail, daily activities (31%) and symptoms and feelings (29%) were the mostly affected

life quality sections followed by leisure (16%), work and school (7%), personal relationships (9%), and treatment (8%).

Patients with hirsutism were compared to 18 patients who consulted for eligibility for laser removal and were not diagnosed with hirsutism according to mFG scoring system as a control group. The mean age was 32.89±13.22 years (range=16-64), the mean DLQI score was 5±5.30 (median 4, range= 0-19) and the mean mFG score was 4,33±1,78 (median=4, range= 2-7) in this group. Very large effect, moderate effect, small effect, and no effect were observed in 4 (22%), 2 (11%), 5 (28%), and 7 (39%) of patients. There was a statistically significant difference between mean DLQI scores of patients with hirsutism and control group ($p<0.01$). Characteristics of study and control group are summarized in Table 1.

Tablo 1. Characteristics of patients and control group

	Patient Group (mFG≥8)	**Control Group (mFG<8)**
Number of patients	40	18
Mean age (years)	21.4±6.98 (16-40)	32.89±13.22 (16-64)
Mean mFG score	17.18±7.64 (median 15.5, r: 8-36)	4.33±1.78; (median:4, range: 2-7)
Mean DLQI score	8.83± 5.66 (median:8, ranj: 0-25)	5±5.30; (median 4, range: 0-19)
Impact of DLQI on QOL		
Extremely large effect	1 (%2.5)	0
Very large effect	13 (%32.5)	4 (%22)
Moderate effect	13 (%32.5)	2 (%11)
Small effect	9 (%22.5)	5 (%28)
No effect at all	4 (%10)	7 (%39)

DLQI: Dermatology life quality index, QOL: Quality of life

Discussion

Hirsutism is the excess growth of dark or coarse hairs in females in a male pattern distribution and seen in 5-15% of reproductive age females across all ethnic groups.[2,23] It is a symptom rather than a disease and has a negative impact on patient's psychological condition as well as on quality of life.[24] Normal or acceptable level of hairiness, perceived by women, is related to ethnical background, cultural and societal norms. Hence, the influence of hirsutism on quality of life may show variability between communities.[20]

To the best of our knowledge, there is only one study about impact of hirsutism on quality of life among Turkish women.[7] In this study, involving 57 patients, mean DYKİ was 9,80 ± 6,50 and median mFG score was 25. Although theoretically a diminished quality of life is expected as severity of hirsutism increases, the author did not observe an association between DLQI and hirsutism grade.[7] This finding was similar to our patients. In other words, we couldn't find a correlation between quality of life and severity of hirsutism. When the studies on this subject were examined, we can see that while some studies have found an association between mFG score and quality of life[15,17,25], others reported no correlation.[16,18] Additionally, some studies even did not look at if there is any association.[9,10,26,27] The lack of relation between the degree of hirsutism and quality of life may be explained by the higher level of hirsutism perceived by the patient. Besides, the QOL may be affected more when certain areas of excessive hair are involved that lead to stigmatization such as face.[7]

The mean DLQI score was 8,83± 5,66 (median=8) in our study. This result was significantly higher compared to control group and implicates that hirsutism has generally a moderate impact on QOL [22]. The average DLQI scores reported in the literature vary between 5.5 and 17.4.[10, 15, 25, 26, 28] While mean DLQI score in our patients is similar to some studies,[7, 17,18,26,28,29] it is lower than some of the DLQI scores in previous studies.[15,25,27] The differences in DLQI scores in previous studies, including ours, were suggested to result from differences in the mean mFG scores.[18]

When DLQI scores were examined in detail, hirsutism had a very large or extremely large effect in 35% (n=14) of patients, moderate effect in 32.5% (n=13) of patients and minimal or no effect in 32.5% (n=13) of patients. Some studies described detailed DLQI scores with corresponding number of patients. According to these studies minimal or small effect was seen in 3-97% of patients, moderate effect was seen in 9-45% of patients and very large or extremely large effect was seen in 0-91% of patients.[15,17,18,25,27,29]

The most important domains contributed to the DLQI scores, i.e. mostly affected subdivisions of life quality were found to be daily activities (such as shopping, choice of clothes or housekeeping) and symptoms and feelings (such as itchy and sore skin, embarrassment) in the literature.[15,17,25,27,29] Our results were in concordance with these literature reports with the highest score in daily activities (31%) followed by symptoms and feelings (29%).

Self-rated hirsutism scores were found to be higher than physician rated scores in previous studies[14]. Patient rated mFG scores were more strongly associated with QOL compared to physician rated mFG scores. Therefore, it was suggested that the impact of hirsutism on QOL, rather than the physician rated severity of hirsutism,

should be the factor that should be considered while planning the treatment.[2]

Our study has some limitations which must be acknowledged. First, patient data were gathered in Covid pandemic during which socialization was extremely limited, remote work has become more common and curfews were ordered at times to limit virus spreading. Even though the daily activities section was the most important domain contributed to the total DLQI scores, this condition could have caused scores to be lower in subdomains and total scores of the scale compared to regular times. Nevertheless, considering that our results are similar to some of the previous studies in literature, this point might be ignored. Second, the number of patients included may be considered insufficient to generalize the results. Therefore, studies with larger patient groups will be valuable for the verification of our results. Lastly, our study was conducted in a single center which makes it difficult to generalize the results to the whole population.

In conclusion, hirsutism is an important issue among Turkish women causing significant impairment on QOL, independent from mFG scores. As a dermatologist, awareness on this subject will influence our approach to patients, type of treatment we recommend, patients' referral to other specialties, and increase in QOL of our patients.

Compliance with Ethical Standards

The study protocol was approved by the Haliç University Ethical Committee (Date: 27/5/2021, Approval number: 113).

Conflict of Interest

The author declares no conflicts of interest.

Author Contribution

All the authors equally contributed to this work.

Financial Disclosure

None

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