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Psychological Evaluation of Patients Seeking Rhinoplasty

Rinoplasti Talebi ile Başvuran Hastaların Psikolojik Değerlendirilmesi

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Abstract

Objective: The aim of this study was to evaluate different determinants of the patient's psychosocial functioning that might possibly affect the outcome of rhinoplastic surgery.

Materials and Methods: Forty-one patients undergoing rhinoplasty, consecutively admitted to and operated upon at the Department of Otolaryngology, Erzurum Regional Training and Research Hospital, Turkey, were studied with regard to their psychological characteristics.

Results: In the patient group, Liebowitz anxiety, Liebowitz/avoidance, and Liebowitz/total scores were significantly higher than the control group ($p<0.001$). No significant differences were found between the patient and control groups according to Rosenberg self-esteem scale and The Hospital Anxiety and Depression Scale. In the Quality of Life SF-36 results, significant differences were found between the patient and control groups apart from SF-36 scores of pain ($p<0.05$), vitality ($p<0.05$), social functioning ($p<0.05$) and emotional role difficulties ($p<0.05$).

Conclusion: Patient selection must be done very carefully to obviate not only physical, but also psychological postoperative complications. The SF-36 questionnaire may be of value in screening-patients for psychological problems prior to rhinoplasty.

Keywords: Rhinoplasty, patient selection, patient satisfaction, psychological characteristics

Öz

Amaç: Çalışmanın amacı; rinoplasti operasyonunun başarısını da etkileyebilecek olan, hastalara ait psikososyal faktörlerin değerlendirilmesidir.

Gereç ve Yöntem: Bu çalışmada; Erzurum Bölge Eğitim ve Araştırma Hastanesi Kulak Burun Boğaz Kliniği'ne rinoplasti olmak amacıyla başvuran ve rinoplasti operasyonu yapılan 41 hastanın psikolojik alt yapıları incelendi.

Bulgular: Hasta grubunda; Liebowitz kaygı, Liebowitz kaçınma ve Liebowitz toplam skorları yüksek bulundu ($p<0,001$). Rosenberg Benlik Saygısı Ölçeği, Hastane Kaygı ve Depresyon Ölçeği skorlarında gruplar arasında önemli bir fark saptanmadı. Yaşam Kalitesi SF-36 Anketi değerlendirilmesinde; ağrı ($p<0,05$), canlılık ($p<0,05$), sosyal fonksiyon ($p<0,05$) ve duygusal rol güçlüğü ($p<0,05$) ölçeklerinde gruplar arasında istatistiksel olarak anlamlı fark saptandı.

Sonuç: Postoperatif dönemde oluşabilecek hem fiziksel hem de psikolojik komplikasyonları önlemek açısından hasta seçiminin dikkatli bir şekilde yapılması oldukça önemlidir. Yasam Kalitesi SF-36 Ölçeği rinoplasti talebi ile gelen hastalarda psikolojik problemlerin taranması açısından faydalı olabilir.

Anahtar Kelimeler: Rinoplasti, hasta seçimi, hasta memnuniyeti, psikososyal karakteristikler

Introduction

The face is the crucial anatomical structure that determines the identity perception. Each facial component is very significant for facialharmony, but nose has a central position on the face, the size and shape of the nose has a great impact on an individual's appearance. Physical appearance plays a major role in the social life and interactions of persons [1]. Authors showed that even small changes from normal appearance might influence other people's perception of the person. Several psychological theories conclude that there is an interaction between patient and perceiver often resulting in a self-fulfilling prophecy in which the patient incorporates the perceiver's expectations and behaviourinto his or her self-concept [2, 3]. This can have a negative effect on a patient's self-esteem, resulting in feelings of anxiety and depression, and subsequently in social avoidance.

Psychosocial concerns may underlie the demands for aesthetic surgery on the face and nose. Successful rhinoplasty operations generally improve the health related quality of life, self-esteem, anxiety symptoms in people in good men-

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tal health. However, psychological results are not satisfactory in patients with significant depressive symptoms, severe personality disorders and psychosis. Complaints generally do not improve and may even worsen [3, 4]. Therefore, the assessment of decisiveness and psychology of the patients and exclusion of inappropriate patients with significant psychopathology before the surgical procedure are crucial for successful outcomes.

With proper analysis, realistic patient expectations and the skills of an experienced facial plastic surgeon, rhinoplasty can be a very rewarding procedure for both patients and surgeons. It is of clinical interest to assess psychosocial functioning of patients seeking rhinoplasty, to recognize the psychological impact of nasal deformity and the effect of rhinoplasty surgery. There is evidence based knowledge that impaired psychological functioning is associated with negative surgical outcome across a broad range of surgical procedures [5, 6]. The aim of this study was to evaluate different determinants of the patient's psychosocial functioning that might possibly affect the outcome of rhinoplastic surgery.

Materials and Methods

The study was carried out at Erzurum Regional Training and Research Hospital, Otolaryngology Department. Forty one patients who demanded rhinoplasty and 34 age- and sex-matchedhealthy control subjects enrolled in this prospective study. The patient group consisted of 14 female and 27 male patients with a mean age of 26.5±5.6 years, and the control group had 15 female and 19 male participants with a mean age of 24.5±4.8 years.The patients were examined with the Hospital Anxiety and Depression Scale (HADS), Liebowitz Social Anxiety Scale (LSAS), Quality of Life Scale Short Form (SF-36), and Rosenberg self-esteem scale (RSES) questionnaires before the operation. We used the previously validated and culturally adapted questionnaires.

Hospital Anxiety and Depression Scale, a self-assessment scale, was developed to detect states of depression, anxietyand emotional distress amongst patients who were being treated fora variety of clinical problems. The final scale has totally 14 items, with responses being scored on a scale of 0-3, with 3 indicating highersymptom frequencies. Score for each subscale (anxiety and depression) can range from 0-21 with scores categorized as follows: normal (0-7), mild (8-10), moderate (11-14), severe (15-21). Scores for the entire scale (emotional distress) range from 0-42, with higher scores indicatingmore distress. The reliability and validity study of the Turkish version was performed by Aydemir et al. [7].

Liebowitz Social Anxiety Scale was developed in the 1980s to facilitate the measurement ofdistress and impairment caused by social anxiety. The scale is comprisedof 13 items that measure the fear of performance situations and 11 itemsthat measure the fear of social interaction. For each of these 24 items, avoidance is also measured. The validity and reliability analyses of theTurkish version of the LSAS were performed by Soykan et al. [8].

Scale Short Form is a multi-purpose, short-form health survey with only 36 questions. It yields an 8-scale profile of functional health and well-being scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index. The questionnaire consists of eight scaled scores, which are the weighted sums of the questions in their section. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight. The lower the score, the more the disability. The validity and reliability analyses of theTurkish version of the LSAS were performed by Kocyigit et al. [9].

Rosenberg self-esteem scale is the most widely used measure of self-esteem. It is a self-administered questionnaire consisting of 10 items with a total score ranging from 10 to 40. The higher the score, the more positive is the self-esteem, defined as a favourable or unfavourable attitude towards the self. The validity and reliability analyses of theTurkish version of the RSES were performed by Cuhadaroglu et al. [10].

The protocol of this study was approved by the ethical committee of Erzurum Regional Training and Research Hospital. The purpose of the study was explained to the patient and control groups and their informed consents were obtained. Individuals with mental retardation, psychotic disorders, dementia, delirium, and other amnestic disorders and those who refused to participate were not included in the study.

Statistical analysis

The statistics was performed with Statistical Packages for the Social Sciences 16.0 (SPSS Inc.; Chicago, IL, USA). The normality distribution of test scores was tested by Kolmogorov-Smirnov and Shapiro-Wilk tests. The differences between the groups were analysed by Chi-square, Student's t-test or Mann-Whitney-U test. Values were presented as mean ± standard deviation or percentages, where appropriate. All statistics were reported in two-tailed form. The p value below 0.05 was accepted significant.

Results

Demographic data of the patient and control groups are given in (Table 1). When levels of social anxiety in the groups were analysed according to the LSAS, in the patient group, Liebowitz anxiety (LBW/anxiety), Liebowitz/avoidance (LBW/avoidance) and Liebowitz/total scores were significantly

Table 1. Comparisons of age and sex of patients and control subjects

	Patient group (n=41)	Control group (n=34)	p
Age	26.5±5.6	24.5±4.8	0.22
Sex (%)			
Female	14 (34.1%)	15 (44.1%)	0.27
Male	27 (65.9%)	19 (55.9%)	

Table 2. Comparisons between patient and control groups according to Hospital Anxiety and Depression Scale (HADS) and Liebowitz Social Anxiety Scale (LSAS) scores and Rosenberg Self-esteem Scala (RSES)

	Patient (n=41)	Control (n=34)	
	Mean±SD	Mean±SD	p
HADS/Anxiety	6.78±3.96	5.81±2.65	0.217
HADS/Depression	4.9±3.17	3.69±2.85	0.076
HADS/Total	11.73± 6.39	9.5±4.78	0.092
LBW/Anxiety	48.34±14.07	41.31±11.06	0.023*
LBW/Avoidance	42.68±10.5	35.78±8.05	0.003*
LBW/Total	91.12±21.31	77.03±17.36	0.003*
RSES	21.39±4.46	21.69±3.73	0.763

HADS: Hospital Anxiety and Depression Scale; LBW: liebowitz; RSES: rosenberg self-esteem scale
*: statistically significant

Table 3. Comparisons between SF-36 subscale scores in patient and control groups

	Patient (n=41)	Control (n=34)	
	Mean±SD	Mean±SD	p
Physical functioning	83.78±17.95	90.31±17.36	0.122
Physical role difficulty	62.80±35.84	76.88±31.07	0.082
Pain	64.17±28.44	79.41±26.72	0.023*
General health state	64.71±18.81	72.00±21.99	0.132
Vitality	63.66±20.62	75.06±16.10	0.012*
Social functioning	71.76±20.59	81.38±18.79	0.043*
Emotional role difficulty	58.51±36.73	77.31±34.11	0.028*
Mental health state	66.07±19.54	72.63±16.65	0.134

*: statistically significant

higher relative to the control group (p<0.001). No significant differences in RSES and HADS were found between patient and control groups (Table 2).

In the SF-36 results, significant differences were found between patient and control groups apart from SF-36 scores of pain (p<0.05), vitality (p<0.05), social functioning (p<0.05) and emotional role difficulties (p<0.05) (Table 3).

Discussion

According to the American Society for Aesthetic Plastic Surgery, over 10 million cosmetic surgical and nonsurgical procedures were performed in 2012. This represents an increase of 300 percent since 1997. Rhinoplasty is the fifth most popular cosmetic surgery and about 150,000 people underwent this surgery. Every year, half a million people seek consultation for the enhancement of the appearance of their nose [11]. Some are unhappy with the nose with which they were born or the way aging has altered their nose. For others, an injury may cause a deformation of the nose and, in many, there is the additional goal of improving breathing.

In selecting a patient for rhinoplasty, medical, sociocultural, psychological and environmental factors should be considered. All facial plastic surgeons try to achieve a successful outcome in their surgical procedures [12]. Determination of success after a cosmetic surgery is ultimately and solely up to patient satisfaction. Therefore, experienced surgeons tend to select the appropriate patients for surgery, to maximize their chances for a successful result. All plastic surgeons have their individual style and approach to patient selection, however there is not a standardized method for this issue.

Quality-of-life (QOL) assessment is an important indicator ofoverall health. The assessment ofthe QOL is deeply rooted around the world and is widely used in developing countries. SF-36 is one of the most popular questionnaires which has been used to assess QOL. Ease of use, simple scoring system and interpretability of final scores are among the advantages of this questionnaire [13, 14]. In the current study, QOL assessment results showed significant differences between patient and control groups apart from the SF-36 scores of pain (p<0.05), vitality (p<0.05), social functioning (p<0.05) and emotional role difficulties (p<0.05).

Nasal deformity, disrupting the facial appearance, is a clinical condition that could lead to attention in the interpersonal relationships and social environment [15]. The concern of being evaluated by others, clear social anxiety or fear of being observed by others can lead to avoidance of attending social life [16].

In the present study, compared to a healthy control group, patients with nasal deformity had meaningfully high score (p<0.001) of Liebowitz social anxiety and avoidance. Rhinoplasty requirement of the patients with nasal deformity may be associated with the will to compensate for the social anxiety and avoidance. In preoperative evaluations of such patients, this concern needs to be taken into account. To

the best of our knowledge, there is no such study on social anxiety and avoidance of patients with nasal deformity and therefore applying with rhinoplasty demand.

Evaluation of anxiety and depression in patients undergoing rhinoplasty is performed in several studies [12, 17]. Although anxiety and depression scores of the rhinoplasty group were higher than the control group, the data were not found statistically significant. Anxiety and depressive disorders are a form clinical situation causing severe functional impairment. However, people with nasal deformity could compensate their circumstances so that they may not be listed in sucha clinical situation. Since these people have nasal deformity for a long time, the deformity does not result in an active psychiatric disease so the patients could survive their life without obstacles.

Similarly, in addition to studies mentioning that cosmetic surgery could enhance self-esteem [18, 19], there are also contradictory reports claiming that cosmetic surgery will not have benefits on mental health [20, 21]. Demand of rhinoplastyto increase self-esteem is not verified. Although nasal deformity causes social anxiety, it does not result in depression and a decrement in self-esteem. Self-esteem is affected not only by appearance but also by various psychological factors [1, 22].

There have been many methods used to identify patients with psychological morbidity, ranging from routine preoperative psychiatric evaluation of cosmetic surgery patients to informal assessment at the preoperative interview. Surgeons have been advised to be wary of operating on depressed, obsessive compulsive, un-cooperative patients, as well as the patient with unrealistic expectations [4, 22]. However, the facial plastic surgeon is not specifically trained to detect and diagnose psychological illness, and an objective, rapid and reproducible method for identifying patients who are not psychologically fit for cosmetic surgery would be welcome.

The strength of our study is to assess the LBW/anxiety and LBW/avoidance in rhinoplasty patients for the first time. However, the results presented are preliminary, the sample-size is limited, follow-up data are still missing and the literature concerning this issue is poor.The most relevant limitation is the use of a self-report questionnaire instead of clinician administered diagnostic measures.

In conclusion, the data in this paper suggest that patients with nasal deformity have reduced social functioning and emotional role difficulties with increased social anxiety and avoidance. Surgeons performing rhinoplasty should keep in mind the importance of recognizing the risk factors during preoperative consultation. Patient selection must be done very carefully to obviate not only physical, but also psychological postoperative complications. SF-36 questionnaire may be of value in screening patients for psychological problems prior to rhinoplasty.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Erzurum Bolge Training and ResearchHospital (06.01.2015/01-7).

Informed Consent: Written informed consent was obtained from patients in this study.

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