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Bodnar L. A.

PSYCHOLOGICAL PREDICTORS OF DISSATISFACTION WITH THE RESULTS OF RHINOPLASTY

Ukrainian Medical Stomatological Academy (Poltava)

bod.lesya@gmail.com

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Introduction. Today, cosmetic surgery is recognized worldwide. To a certain extent, it is a sign of the civilization of the human community and the level of mentality. Mass media, physical culture and sports, beauty contests are widely used to form aesthetic standards of appearance in society, to cultivate a harmoniously developed body and face. The availability of this type of specialized medical care, a wide network of various medical centers and clinics are of great interest to people with congenital and acquired cosmetic defects and facial deformity.

Currently, rhinoplasty is one of the most popular operations in aesthetic surgery [1-3].

The achieved result with rhinoplasty should be impeccable, especially in comparison with other operations, since the nose is located in the most prominent place of the face [4,5].

There are two types of indications for reconstructive surgery: 1) absolute, when the deformation or defect is sharply distinct and noticeable at first glance at the patient; 2) relative, when the defect or deformation is insignificant and hardly noticeable, but the patient fixes attention on it.

In the case of relative indications for rhinoplasty, the doctor must take into account the psychological characteristics, correctly assess the mental state of patients and compare with the severity of the cosmetic defect. At the same time, it is important to distinguish those who really need rhinoplasty from patients with excessive aesthetic sensibility and inadequate attitude to their defect.

Most individuals who request surgical cosmetic procedures are mentally healthy. However, there are also individuals who have certain mental disorders. For these individuals, both the preoperative period and the cosmetic surgery itself can have negative consequences, creating problems for both the patient and the surgeon [6-10]. Such patients are prone to depression, adaptation disorders, social isolation, family dysfunction, self-torture, anger towards the surgeon and the environment; they may themselves unreasonably require repeated surgery [2]. Surgeons also can not avoid problems associated with the mental condition of the patient; however, annoying requests, and sometimes harassment by patients for repeated surgery, complaints and lawsuits are possible. Therefore, the main task for the surgeon is the identification at the preoperative stage of those patients who may have an unfavorable outcome in terms of psychological adaptation and psychosocial functioning, subject to technically successful plastic surgery.

The aim of the work is to identify predictors of dissatisfaction with rhinoplasty results and, based on them, to develop and test a screening questionnaire to predict dissatisfaction with surgery.

Object and methods of research. To achieve this goal, the authors examined 150 people who referred to a plastic surgeon for cosmetic rhinoplasty. Of these, 51 individuals (men – 17, women – 34, aged 19 to 50 years) had cosmetic defects and deformities of nose, but without mental disturbances during the initial interview, therefore, these individuals represented the control group. All other individuals were divided into two groups, depending on the presence or absence of cosmetic defects of nose:

- the first group (I) – 69 individuals (men – 30, women – 39, aged 19 to 50 years) with visible for surrounding people defects and deformities of the external nose, which deviated from the established aesthetic norm accepted in cosmetology, but did not distort the appearance of the face and did not violate the physiological functions of the organ.
- the second group (II) – 30 individuals (men – 14, women – 16, aged 19 to 30 years) did not have cosmetic defects of the nose; however, these individuals fixed unreasonably great attention on the nose; these patients were categorically dissatisfied with their nose and persistently demanded to change its shape. In the history, such patients had repeated visits to plastic surgeons, repeated rhinoplasty, while the results of these operations did not satisfy patients.

None of the individuals in both groups had abnormalities in the physiological functions of the nose. The main motive for visits to plastic surgeons for all individuals was the desire to achieve an ideal image and, due to a change in appearance, to establish broken interpersonal relationships, or to achieve success in the professional field, taking advantage of their own appearance.

By age, social and demographic characteristics, there were no statistically significant differences between the examined individuals.

All patients were previously thoroughly acquainted with the conditions of the study and signed individual informed consent regarding their voluntary participation in accordance with the requirements of the Helsinki Declaration.

Diagnostic assessment and systematization of the revealed mental disorders was carried out in accor-

dance with the criteria of the International Classification of Diseases of the tenth revision. To objectify the obtained surgical and cosmetic data, the authors used the advice of specialists of the corresponding profile of the Department of Plastic, Reconstructive and Aesthetic Surgery of the Poltava Regional Clinical Hospital named after M. Sklifosovsky.

All patients underwent a comprehensive clinical-anamnestic, clinical-psychopathological, psychodiagnostic and socio-demographic examination.

Using the clinical-anamnestic method, the authors studied the anamnesis, features of development, motives for surgery, repeated consultations with a plastic surgeon, support for this decision by relatives.

Using clinical-psychopathological examination, the authors analyzed the complaints, evaluated the state of somatic, neurological and mental sphere.

A comprehensive psychodiagnostic examination included use of Hamilton Depression Rating Scale (HDRS) and State Trait Anxiety Inventory (STAI).

The authors performed a socio-demographic survey using a specially designed scheme, including the following characteristics: age, level of education, marital status, nature of work, financial situation.

For statistical processing of research results, the authors used parametric and non-parametric methods of variational statistics. The difference was considered statistically significant at $p < 0.05$. To develop the prognostic criteria, the authors used a non-uniform sequential Wald-Genkin procedure. The calculations were performed on IBM PC Pentium using Excel and Statistica 7.0 for Windows.

Results and discussion. In a comparative analysis of clinical and anamnestic data, the authors found that persons who had a cosmetic defect or deformity of the nose, referred to plastic surgeons mainly for the first time, more often to improve their appearance and enhancement of the fact; these individuals almost always received moral support from relatives. Individuals who did not have cosmetic defects of the nose, sought to perform rhinoplasty to improve their social functioning, referred to plastic surgeons mainly more than once; these patients did not receive psychological satisfaction from previous operations, and did not have moral support and understanding from relatives and friends.

Subsequently, we analyzed the clinical and psychopathological characteristics of individuals who referred to plastic surgeons for cosmetic rhinoplasty. Thus, for Group I, we found a wide range of non-psychotic psychiatric disorders with predominance of anxiety-depressive symptoms. Patients most often had depressive syndrome (n = 18; 26.09%) both separately and in various combinations (anxiety-depressive, depressive-hypohondriac, astheno-depressive) and anxiety syndrome (n = 17; 24.64%), less often – hysteroid (n = 14; 20.29%), asthenoneurotic (n = 13; 18.84%) and dysmorphophobic (n = 7; 10.14%) syndromes. At the nosological level, 18 (26.09%) patients had generalized anxiety disorder (F41.1), 12 (17.39%) patients had neurasthenia (F48), 10 (14.49%) patients had dissociative disorder (F44). We registered hypochondrial disorder (F45.2) and adaptation disorder (F43.2) with the same frequency (7 patients, 10.14%). Less commonly, we diagnosed dysthymia (F34.1) (n = 6; 8.70%), mixed anxiety and depressive disorder (F41.2) (n = 5, 7.25%), and other specified anxiety disorder (F41.8) (n = 4; 5.80%).

Instead, for Group II, we diagnosed only dysmorphophobic syndrome (100.00%) within hypochondrial disorder (F45.2), since the belief in the presence of a defect did not reach the delusional level.

Along with clinical and psychopathological differences at the syndromic and nosological levels, in both groups the authors observed some peculiarities of the pathopsychological characteristics.

Thus, on the basis of the results of the analysis of the presence and degree of depression carried out according to the Hamilton Depression Rating Scale (HDRS), the authors showed that depressive symptoms were characteristic of the vast majority of patients of Group II (n = 24; 80.00%) with an average score of 16.06 ± 1.40. For Group I, depressive symptoms were significantly less frequent, only half of individuals (n = 35; 50.72%), and had less severity with an average score of 9.75 ± 0.87 ($p < 0.05$). In individuals of the control group, depressive manifestations were not reported at all.

Based on State Trait Anxiety Inventory (STAI), the authors showed that patients of Group II had the highest level of personal anxiety. So, its average score was determined at a high level and was 46.23 ± 1.07, which was confirmed by an individual analysis, according to which personal anxiety was high in 20 (66.67%) patients. For Group I, the severity of personal anxiety was significantly lower with an average score of 38.36 ± 0.91, ($p < 0.05$), and in individual analysis, high levels of personal anxiety were characteristic only in every fifth patient (n = 13; 18.84%), ($p < 0.05$). All patients in the control group had low levels of both situational and personal anxiety with average scores of 27.23 ± 0.91 and 23.72 ± 2.20, respectively.

According to the results of the study, the authors found that dysmorphophobia, restriction of social functioning, repeated rhinoplasty with a history of unrealistic outcome expectations, high levels of depression and anxiety may be predictors of adverse psychological effects of rhinoplasty and cause dissatisfaction with its results.

Given the lack of clear criteria that would allow the doctor to quickly and objectively predict the possibility of adverse psychological effects of rhinoplasty and patient dissatisfaction with the results of successful surgery, it turned out to be advisable to adapt the predictors to the questions of the screening questionnaire for ease of use in practice using the non-uniform sequential Wald-Genkin procedure.

Our goal was to create a questionnaire that included only a small number of specific questions and did not take much time from the surgeon. At the same time, the questionnaire should be clear to the patient **(table).**

The screening questionnaire developed by us consists of 10 questions to which the doctor, communicating with the patient, answers “yes” or “no” and summarizes the corresponding values of the diagnostic coefficients. If the result is less than -15 (minus 15), then satisfaction with the result of rhinoplasty is predicted and its favourable psychological consequences are expected. If, however, the sum of diagnostic coefficients exceeds 7, then, on the contrary, dissatisfaction with the result of surgery is predicted.

Conclusions. Thus, according to the results of our studies, we found that the predictors of adverse psychological impact of rhinoplasty and dissatisfaction with its results can be the following factors: dysmorphophobia, restriction of social functioning, repeated rhinoplasty with a history of unrealistic expectations of results, high levels of depression and anxiety.

The identified predictors were adapted into a short screening questionnaire to predict psychological effects and dissatisfaction with the results of rhinoplasty. The developed questionnaire will help the surgeon to identify patients who do not need surgery, may have psychiatric disorders and should be referred to a psychiatrist for consultation.

Prospects for further research. Given the high frequency of detected mental disorders in persons consulted by surgeons for cosmetic plastic surgery on the external nose and the dissatisfaction of such patients with rhinoplasty results, further studies of psychological predictors of the consequences of surgical interventions are needed. Based on these results, it is promising to expand and supplement the screening questionnaire, which will help the surgeon to choose the right treatment tactics and refer the patient to a psychiatrist if there are indications. An additional promising area of research is the development of effective methods of treatment for identified mental disorders.

Table – Screening questionnaire for predicting psychological effects and dissatisfaction with rhinoplasty

N.	*Factors*	*Gradation of the indicator*	*Diagnostic coefficient*	*Informativeness*
1.	Significant exaggeration or absence of defect or deformity of the nose in the patient	yes	9.0	3.08
		no	-9.0	
2	History of repeated rhinoplasty	yes	4.7	1.33
		no	-4.7	
3.	Limited communication of the patient with family, friends, colleagues due to his/her “inferiority”	yes	4.5	1.87
		no	-4.5	
4.	Constant masking of the “defect” (bright makeup, glasses, experiments with clothes)	yes	3.4	1.18
		no	-3.4	
5.	Sustainably lowered mood due to “inferiority”	yes	2.9	0.94
		no	-2.9	
6.	Thoughts on defect (“inferiority”) last for more than 1-2 hours per day	yes	2.9	0.80
		no	-2.9	
7.	Patient’s refusal to be photographed due to “imperfect appearance”	yes	2.7	0.56
		no	-2.7	
8.	Social motives for rhinoplasty (to please a partner, establish contact with colleagues, friends, achieve success in professional activities, find a job, etc.)	yes	2.5	0.59
		no	-2.5	
9.	Thoughts on “inferiority” interfere with daily activities (performing professional duties, daily household chores, etc.)	yes	1.9	0.54
		no	-1.9	
10.	Constant anxiety associated with the presence of a defect.	yes	1.2	0,18
		no	-1.2	

References

1. Philips KA. Body Dysmorphic Disorder: Advances in Research and Clinical Practice. NY: Oxford University Press; 2017. 600 p.
2. Reichert M, Scheithauer M, Hoffmann TK, Hellings P, Picavet V. What rhinoplasty surgeons should know about body dysmorphic disorder (BDD). Laryngorhinootologie. 2014 Aug;93(8):507-13. DOI: 10.1055/s-0034-1371825
3. Medvedev VE, Vissarionov VA, Avdoshenko KE, Martynov SE. Rasprostranennost psikhopatologicheskikh rasstrojstv sredi paczientov plasticheskogo khirurga i kosmetologa (rezultaty psikhometricheskogo issledovaniya). Psikhiatr i psikhofarmakoter. 2011;13(1):18-22. [in Russian].
4. Andretto AC. The central role of the nose in the face and the psyche: review of the nose and the psyche. Aesthetic Plast Surg. 2007 Jul-Aug;31(4):406-10.
5. Skrypnikov AM, Zhyvotovska LV, Bodnar LA, Shynder VV. Psykholohichni aspekty estetychnoyi rynoplastyky. Svit medytsyny ta biolohiyi. 2016 Sich;1(55):205-10. [in Ukrainian].
6. Lekakis G, Picavet VA, Gabriëls L, Grietens J, Hellings PW. Body Dysmorphic Disorder in aesthetic rhinoplasty: validating a new screening tool. Laryngoscope. 2016 Aug;126(8):1739-45. DOI: 10.1002/lary.25963
7. Wang Q, Cao C, Guo R, Li X, Lu L, Wang W, et al. Avoiding Psychological Pitfalls in Aesthetic Medical Procedures. Aesthetic Plast Surg. 2016 Dec;40(6):954-61.
8. Joseph J, Randhawa P, Hannan SA, Long J, Goh S, O’Shea N, et al. Body Dysmorphic Disorder in Patients Undergoing Septorhinoplasty Surgery: Should We Be Performing Routine Screening? Clin Otolaryngol. 2017 Jun;42(3):508-13. DOI: 10.1111/coa.12752
9. Baykal B, Erdim I, Ozbay I, Oghan F, Oncu F, Erdogdu Z, et al. Evaluation of Relationship Between Body Dysmorphic Disorder and Self-Esteem in Rhinoplasty Candidates. J Craniofac Surg. 2015 Nov;26(8):2339-41. DOI: 10.1097/SCS.0000000000002082
10. Strazdins E, Nie YF, Ramli R, Palesy T, Christensen JM, Alvarado R, et al. Association Between Mental Health Status and Patient Satisfaction With the Functional Outcomes of Rhinoplasty. JAMA Facial Plast Surg. 2018 Jul;20(4):284-91. DOI: 10.1001/jamafacial.2018.0001

ПСИХОЛОГІЧНІ ПРЕДИКТОРИ НЕЗАДОВОЛЕНОСТІ РЕЗУЛЬТАТАМИ РИНОПЛАСТИКИ

Боднар Л. А.

Резюме. У статті проаналізовані результати обстеження осіб, які зверталися до пластичного хірурга для проведення косметичної ринопластики, а також задоволеність проведеною операцією. Всі пацієнти в залежності від наявності або відсутності косметичних дефектів носа були розділені на дві групи: перша (I) – 69 осіб (чоловіків – 30, жінок – 39, у віці від 19 до 50 років) з помітними для оточуючих дефектами і деформаціями зовнішнього носа, які відхилялися від встановленої естетичної норми, прийнятої в косметології, але не спотворювали зовнішність особи і не порушували фізіологічних функцій органу; друга група (II) – 30 осіб (чоловіків – 14, жінок – 16 у віці від 19 до 30 років), косметичних недоліків носа не мали, проте фіксували на ньому невиправдано велика увага, були категорично ним незадоволені і наполегливо вимагали змінити його форму.

За результатами дослідження встановлено, що у переважної більшості обстежених осіб, які звертаються до пластичних хірургів з метою проведення ринопластики, виявлені психічні порушення непсихотичного регістру, які відрізнялися в залежності від наявності або відсутності дефектів та деформацій носа. Так, у об-

стежених I групи діагностований широкий спектр непсихотичних психічних порушень з переважанням генералізованого тривожного розладу (26,09%), неврастенії (17,39%) та дисоціативного розладу (14,49%). У осіб, які дефектів і деформацій носа не мали, але наполягали на проведенні ринопластики (II група), діагностували іпохондричний розлад (100,00%) з дисморфофобією на синдромальному рівні, і більш виражену депресивну симптоматику, а також особистісну тривожність.

При порівняльному аналізі клініко-анамнестичних даних визначено, що особи, які мали косметичний дефект носа, зверталися до пластичних хірургів переважно вперше, частіше з метою поліпшення зовнішнього вигляду. Обстежені, в яких косметичних недоліків носа не було, прагнули зробити ринопластику для поліпшення соціального функціонування, зверталися до пластичних хірургів переважно не один раз, не отримуючи психологічного задоволення від проведених раніше операцій.

На підставі результатів дослідження визначено предиктори негативних психологічних наслідків ринопластики і незадоволеності її результатами (дисморфофобія, обмеження соціального функціонування, повторні ринопластики в анамнезі з нереалістичними очікуваннями результатів, високий рівень депресії і тривоги) і запропонована скринінг-анкета для своєчасного виявлення пацієнтів, які будуть не задоволені вдало проведеним оперативним втручанням.

Ключові слова: ринопластика, задоволеність, скринінг-анкета.

ПСИХОЛОГИЧЕСКИЕ ПРЕДИКТОРЫ НЕУДОВЛЕТВОРЕННОСТИ РЕЗУЛЬТАТАМИ РИНОПЛАСТИКИ

Боднар Л. А.

Резюме. В статье проанализированы результаты обследования лиц, которые обращались к пластическому хирургу для проведения косметической ринопластики, а также удовлетворенность проведенной операцией. Все пациенты в зависимости от наличия или отсутствия косметических дефектов носа были разделены на две группы: первая (I) – 69 человек (мужчин – 30, женщин – 39, в возрасте от 19 до 50 лет) с заметными для окружающих дефектами и деформациями наружного носа, которые отклонялись от установленной эстетической нормы, принятой в косметологии, но не искажали внешность лица и не нарушали физиологических функций органа; вторая группа (II) – 30 человек (мужчин – 14, женщин – 16 в возрасте от 19 до 30 лет), косметических недостатков носа не имели, однако фиксировали на нем неоправданно большое внимание, были категорически им недовольны и настойчиво требовали изменить его форму.

По результатам исследования установлено, что у подавляющего большинства обследованных лиц, которые обращаются к пластическим хирургам с целью проведения ринопластики, выявлены психические нарушения непсихотического регистра, которые отличались в зависимости от наличия или отсутствия дефектов и деформаций носа.

На основании результатов исследования определены предикторы негативных психологических последствий ринопластики и неудовлетворённости ее результатами (дисморфофобия, ограничение социального функционирования, повторные ринопластики в анамнезе с нереалистичными ожиданиями результатов, высокий уровень депрессии и тревоги) и предложена скрининг-анкета для своевременного выявления пациентов, которые будут не удовлетворены удачно проведенным оперативным вмешательством.

Ключевые слова: ринопластика, удовлетворенность, скрининг-анкета.

PSYCHOLOGICAL PREDICTORS OF DISSATISFACTION WITH THE RESULTS OF RHINOPLASTY

Bodnar L. A.

Abstract. In the article, the authors analyzed the results of a survey of individuals who referred to a plastic surgeon for cosmetic rhinoplasty, as well as the authors evaluated the satisfaction of the operation. All patients, depending on the presence or absence of cosmetic defects of the nose, were divided into two groups: the first (I) – 69 individuals (men – 30, women – 39, aged 19 to 50 years), with visible defects and deformations of the external nose, which deviated from the established aesthetic norms accepted in cosmetology, but did not distort the appearance of the face and did not violate the physiological functions of the nose; the second group (II) – 30 individuals (men – 14, women – 16, aged 19 to 30 years) who do not have cosmetic defects of the nose, however these individuals fixed unreasonably great attention on their nose, were categorically dissatisfied with it, as well as persistently demanded to change its shape.

In accordance with the results of the study, the authors showed that the vast majority of the examined individuals, who referred to a plastic surgeon for rhinoplasty, have mental disorders of the nonpsychotic register, which differed depending on the presence or absence of defects and deformities of the nose.

Based on the results of the study, the authors determined the predictors of the negative psychological consequences of rhinoplasty and dissatisfaction with its results (dysmorphophobia, limitation of social functioning, repeated rhinoplasty with an unrealistic expectation of results, high levels of depression and anxiety) and suggested a screening questionnaire for the timely identification of patients who would not be satisfied with a successful surgical intervention.

Key words: rhinoplasty, satisfaction, screening questionnaire.

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