ORIGINAL ARTICLE

BODY DYSMORPHOPHOBIC DISORDER AND OTHER NON-PSYCHOTIC MENTAL DISORDERS IN PERSONS WITH COSMETIC DEFECTS AND DEFORMITIES OF THE NOSE

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ABSTRACT

The aim: To explore the features of non-psychotic mental disorders in people with cosmetic defects and deformities of the external nose in order to optimize their treatment and rehabilitation measures.

Material and methods: The authors examined 99 persons who reffered to a plastic surgeon for cosmetic rhinoplasty. The first group (Group I) included 30 individuals; they did not have cosmetic defects of the nose; however, these individuals fixed unreasonably great attention on the nose and persistently demanded to change its shape. The second group (Group II) included 69 individuals with visible defects and deformities of the external nose, which deviated from the established aesthetic norm, but did not distort the appearance and did not violate the physiological functions. A comprehensive clinical-anamnestic, clinical-psychopathological, psychodiagnostic and socio-demographic examination of patients was carried out.

Results: Patients of Group I with dysmorphophobic disorder and without defects and deformities of the nose, who insisted on surgical correction, compared with persons of Group II with minimal defects and deformities, had a deeper severity of depressive symptoms and personal anxiety with a predominance of dysthymic character accentuation, low adaptability, complete intolerance of themselves and their appearance, a high level of emotional discomfort and internal control.

Conclusions: It is necessary to improve a comprehensive system of psychotherapeutic measures in combination with pharmacotherapy, in order to reduce psychopathological symptoms, improve the level of psychosocial functioning of the patients and create the preconditions for decision to abandon surgery.

KEY WORDS: Body dysmorphophobic disorder, cosmetic defects of the nose, aesthetic rhinoplasty

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INTRODUCTION

With the increase in the number and popularity of cosmetic procedures and interventions, doctors of related specialties are increasingly faced with patients with body dysmorphic disorder (BDD), characterized by excessive attention to non-existent or minor defects in their appearance [1].

The prevalence of BDD in the general population ranges from 1 to 2%, and in patients with dermatological and cosmetic surgery is from 2.9 to 24% [2-3]. BDD includes distorted body perception with excessive concern for an imaginary defect. Most patients experience certain disturbances in social or professional functioning, and as a result of obsessive anxiety they may develop compulsive behavior. In severe cases, there is a risk of suicide.

Most people with BDD do not realize that their defect is minimal or absent. They misjudge the psychiatric origin of their problems and often require aesthetic surgical treatment to solve their appearance problems, ie they seek cosmetics to treat the mental disorder [3].

Due to the central position of the nose on the face, this organ is one of the most common problem areas in patients with BDD. Thus, aesthetic rhinoplasty is considered one of the most frequently requested and performed surgical procedures in this population. However, there is growing agreement that BDD should be considered a contraindication for aesthetic rhinoplasty as there is no favorable outcome [4-9].

To prevent dissatisfaction with surgery in such patients, as well as in the context of the growing importance of forensic arguments, the surgeon performing rhinoplasty should be familiar with BDD. Educating professionals to systematic examination, diagnose and refer these patients to adequate psychiatric treatment is important given the high prevalence of BDD in surgical patients and the fact that cosmetic procedures improve the condition of these patients only in isolated cases.

Therefore, given the ethical, safe and legal considerations associated with aesthetic procedures in these patients, accurate identification and appropriate selection of procedures are crucial.

THE AIM

The purpose of the work was to study of non-psychotic mental disorders in people with cosmetic defects and

deformities of the external nose in order to optimize their treatment and rehabilitation measures.

MATERIALS AND METHODS

Authors examined 99 people who reffered to a plastic surgeon for cosmetic rhinoplasty. Patients were examined on the Department of Psychiatry, Narcology and Medical Psychology of "Regional Institution for Psychiatric Care of Poltava Regional Council" and on the Department of Maxillofacial, Plastic, Reconstructive and Aesthetic Surgery of "Sklifosovsky Poltava Regional Clinical Hospital of Poltava Regional Council " in order to study the clinical, psychopathological and pathopsychological characteristics of individuals with cosmetic defects and deformities of the outer nose

All patients were divided into two groups depending on the presence or absence of cosmetic defects of the nose. The first group (Group I) included 30 subjects (7 men, 23 women, aged 19 to 30 years), who did not have cosmetic defects of the nose; however, these individuals fixed unreasonably great attention on the nose; they were categorically dissatisfied with their nose and persistently demanded to change its shape. Such patients have repeatedly consulted plastic surgeons, they underwent repeated rhinoplasty, the results of which did not satisfy them. The second group (Group II) included 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. Congenital deformities were registered as follows: hump-shaped nose (n = 17; 24.6%), depression of the back of the nose (saddle-shaped nose) (n = 8; 11.6%), wide location of nasal bones (n = 8; 11.6%) , congenital curvature of the membrane (n = 7; 10.1%), long nose (n = 6; 8.7%), wide wings of the nose (n = 2; 2.90%), wide (forked) tip of the nose = 1; 1.5%); acquired deformities were registered as follows: curved of the back of the nose (n = 8; 11.6%) and cosmetic defects of the tip (n = 5; 7.3%), back (n = 2; 2.9%)) and wings (n = 7; 10.1%) of the nose. There were no statistically significant differences between the patients in terms of age and socio-demographic characteristics.

The main motive for visits to plastic surgeons for all subjects 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.

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 accordance with the criteria of the International Classification of Diseases (ICD-10). To objectify the obtained surgical and cosmetic data, the authors used the advice of specialists of the corresponding profile.

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.

Comprehensive psychodiagnostic examination included the use of the Montrogmery-Asberg scale (MADRS) to assess depression (1979), State Trait Anxiety Inventory (STAI) (1996), characterological questionnaire of K. Leonhard - G. Shmishek (1981), the method of assessing the level of socio-psychological adaptation (SPA) of K. Rogers - R. Diamond (adapted by AK Osnitsky, 2004).

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 $p \leq 0.05$.The calculations were performed on IBM PC Pentium using Excel and Statistica 7.0 for Windows.

RESULTS

Based on the purpose and objectives of the study, the authors first analyzed and compared the clinical and anamnestic data of the subjects. It was found that although the subjects did not have deformities and defects of the nose, they asked plastic surgeons to reduce (n = 11; 36.7%) or enlarge (n = 3; 10.0%) the nose, wanted to eliminate the invisible and contrived hump (n = 2; 6.7%) or curvature (n = 1; 3.3%), but more often (n = 13; 43.3%) they could not even clearly explain their desires to the surgeon and persistently asked to make the nose "just beautiful" . All subjects showed excessive anxiety about the "defect" of the nose and actively wished to correct it. It is characteristic that the majority of patients (n = 17; 56.7%) asked plastic surgeons for surgery for the second time, since all previous attempts to make their nose "perfect" and "ideal" were, in their opinion, unsuccessful.

Almost all of the subjects of Group I complained about the limitation of social contacts due to "ugliness" and their own inferiority. In their opinion, self-doubt and constant fear of criticism from others impeded success in their career and personal life. Therefore, the vast majority of individuals (n = 22; 73.3%) asked a plastic surgeon for cosmetic surgery in order to improve their social functioning. Relatives and friends of the subjects of group I did not support their decision on rhinoplasty. They considered these actions completely thoughtless and unreasonable. This situation further worsened the mental state of the patients.

In the analysis of clinical and anamnestic data of patients of group II, it was found that the motive for treatment for the

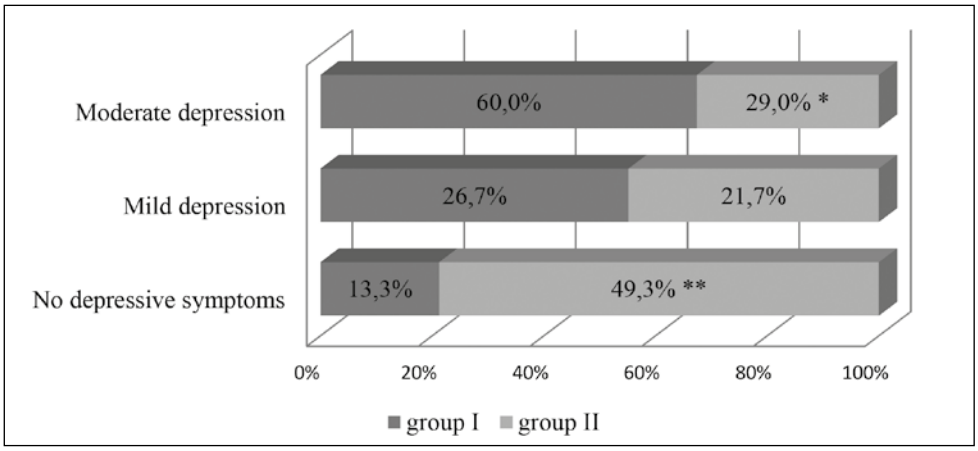

Fig. 1. The degree of depressive symptoms on the MADRS scale in people with cosmetic defects and nasal deformities with BDD and other non-psychotic mental disorders
Notes: *- the difference is significant (p <0,01)
** - the difference is significant (p <0,001)

vast majority of respondents (n = 50; 72.5%) was to improve their appearance and face as well as achieve an ideal image. For a third of patients (n = 19; 27.5%), the main reason for surgery was improvement in social functioning. Individual patients (n = 4; 5.8%) indicated both causes. Most patients (n = 42; 60.9%) of group II asked plastic surgeons to perform rhinoplasty for the first time, some of them (n = 11; 15.9%) asked for it a second time; every fourth (n = 16; 23.2%) previously underwent plastic surgery on other parts of the body (facelift, mammoplasty, liposuction, etc.).

Relatives supported almost all persons with nasal deformities and their experiences (n = 63; 91.3%), but the decision on surgical correction of the nose was positively perceived only in every fourth family (n = 20; 29.0%).

Thus, in a comparative analysis of clinical and anamnestic data, the authors found that persons who had a cosmetic defect or deformity of the nose, reffered 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, reffered 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, the authors analyzed the clinical and psychopathological characteristics of individuals who reffered to plastic surgeons for cosmetic rhinoplasty. Thus, in group I, from a wide range of non-psychotic mental disorders, patients were diagnosed with dysmorphophobic (100%) syndrome within hypochondriacal disorder (F45.2). In general, manifestations of dysmorphophobic syndrome were found in (100.00%) subjects. All these patients had a depressive or subdepressive mood background, predominant complex of ideas about the presence of a "physical handicap", which had a very negative effect on their social and interpersonal functioning. However, in the examined persons, the belief in the presence of the defect did not reach a delusional level; also disturbances of perception were not observed that allowed authors to diagnose in these patients nondelusional dysmorphophobia within hypochondriacal disorder according to ICD-10.

The patients constantly looked closely at the "defect", fixed their attention on the nose, constantly touched the nose; complained about the sensation of increased attention of others to the nose and hostility towards themselves, which was accompanied by a component of anxiety. Typical for the majority of patients (n = 21, 70.0%) was a hypertrophied desire to hide their "defect" in all possible ways, using inventions of the cosmetic industry and bright jewelry. Quite often, such attempts were frankly unsuccessful and led to a completely opposite result.

Most patients were overly critical of their appearance, despite the fact that people around did not attach particular importance or did not notice the "defect" at all. Conspicuous is the fact that almost all subjects had a normal or even pleasant appearance, but believed that they were "ugly" because of their nose and avoided contact with people for fear of ridicule (n = 27; 90.0%). The majority of patients (n = 23; 76.7%) complained that even their relatives did not understand them, considering their problem a manifestation of stupidity or a desire to stand out. Some of the subjects (n = 22; 73.3%) had signs of a mirror symptom (constant use of a mirror, attempts to find an advantageous angle in which the "defect" would be hardly noticeable, reasoning about what kind of nose correction they need) and signs of photography symptom (n = 16; 53.3%) (categorical refusal to be photographed under any pretext, but in reality the fear that the photo will "perpetuate the ugliness").

Instead, in group II, the authors found a wide range of nonpsychotic mental disorders with a predominance of anxiety and depressive symptoms. Patients most often had depressive syndrome (n = 18; 26.1%) both separately and in various combinations (anxiety-depressive, depressive-hypohondriac, astheno-depressive) and anxiety syndrome (n = 17; 24.6%), less often - hysteroid (n = 14; 20.3), asthenoneurotic (n = 13; 18.8%) and dysmorphophobic (n = 7; 10.1%) syndromes. At the nosological level, 18 (26.1%) patients had generalized anxiety disorder (F41.1), 12 (17.4%) patients had neurasthenia (F48), 10 (14.5%) patients had dissociative disorder (F44). Hypochondrial disorder (F45.2) and adaptation disorder (F43.2) were reported with equal frequency (7 patients, 10.1%). Less commonly, the authors

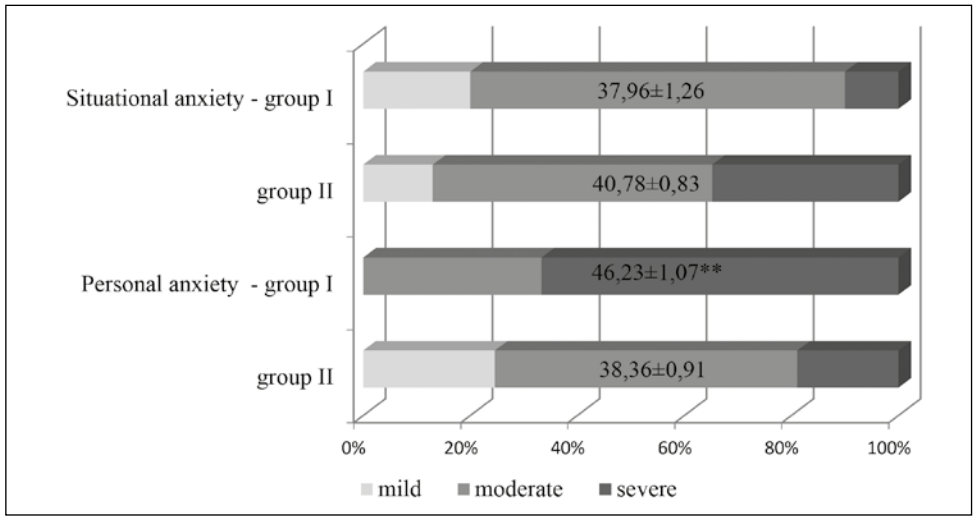

Fig. 2. Situational and personal anxiety in people with cosmetic defects and nasal deformities with BDD and other non-psychotic mental disorders. Notes: ** - the difference is significant (p <0.001)

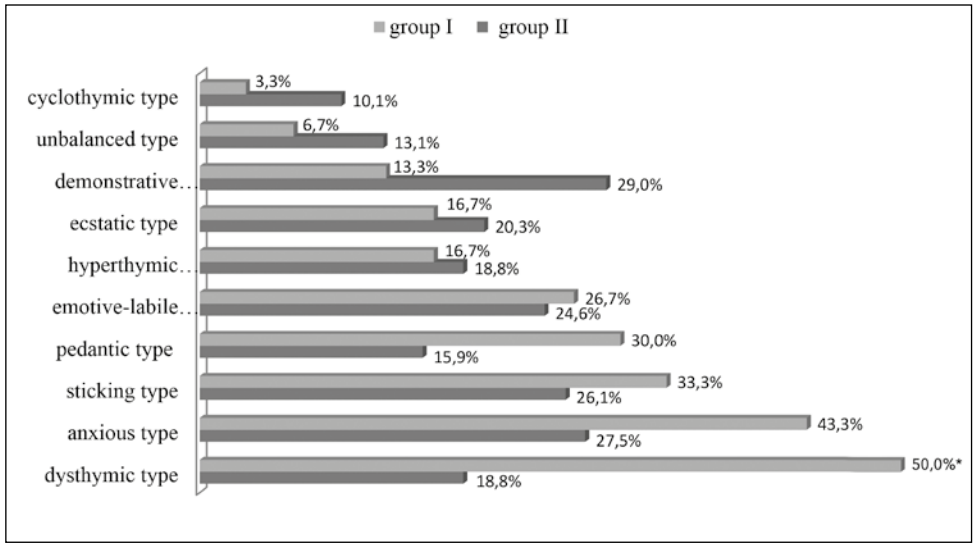

Fig. 3. Types of character accentuations in people with cosmetic defects and nasal deformities with BDD and other non-psychotic mental disorders. Notes: *- the difference is significant (p <0,01)

diagnosed dysthymia (F34.1) (n = 6; 8.7%), mixed anxiety and depressive disorder (F41.2) (n = 5, 7.3%), and other specified anxiety disorder (F41.8) (n = 4; 5.8%).

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

Analysis of the presence and severity of depression, conducted according to the MADRS scale, showed that depressive symptoms were characteristic of the vast majority of subjects in group I (n = 26; 86.7%) with a mean score of 26.23 ± 1.4 and corresponded to moderate depression. This was confirmed by individual analysis, according to which the vast majority of subjects (n=18; 60.0%) had moderate depressive symptoms, 8 (26.7%) subjects had mild symptoms, and only 4 (13.3%) subjects had no depressive symptoms. Individuals in group II had depressive symptoms significantly less often (n = 35; 50.7%), and such symptoms were less pronounced with a mean score of 18.75 ± 0.87 (p <0.001), which corresponded to mild depression. Individual analysis of the survey results revealed that 20 (29.0%) people had a moderate degree of depression, 15 (21.7%) patients had a mild degree (Fig. 1).

It was found that patients of group I, compared with patients of group II, more often had depressive symptoms (13.3% and 49.3%, respectively, $\chi 2 = 12.244$, p <0.001) and moderate depression (60.0% and 29.0 % respectively, $\chi 2 = 8.504$, p = 0.004).

Based on State Trait Anxiety Inventory (STAI), the authors showed that patients of Group I had a higher level of personal anxiety (Fig. 2).

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 II, the severity of personal anxiety was significantly lower with an average score of 38.36 ± 0.91 (p <0.001), and, in individual analysis, its high level was determined only in one in five (n = 13; 18.8 %) in comparison with Group I ($\chi 2 = 21,522$, p = 0,001).

It also attracted attention that in the Group I personal anxiety significantly prevailed over situational anxiety (46.23 ± 1.07 vs. 37.96 ± 1.26, respectively) (p <0.001), while in Group II the analysis revealed almost the same values of both situational anxiety and moderate personal anxiety (40.78 ± 0.83 and 38.36 ± 0.91, respectively).

When studying the types of character accentuations with the help of the questionnaire of K. Leonhard - G. Shmishek, it was found that dysthymic accentuation (n = 15; 50.0%) prevailed in persons of Group I in comparison with Group II (n = 13; 18.8%) , $\chi 2 = 10.008$, $p = 0.002$, but demonstrative accentuation prevailed in persons of Group II (n = 20; 29.0%). The dominant types of accentuations in groups I and II were inferior only to anxiety type, which was determined somewhat less frequently (n = 13; 43.3% and n = 19; 27.5%, respectively). (Fig. 3).

When studying the level of socio-psychological adaptation by the method of Rogers-Diamond, a statistically significant difference was recorded in the following indicators: adaptability, maladaptability, self-rejection, emotional discomfort, internal control. Thus, the vast majority of people in Group I (n = 18; 60.0%) had low adaptability, and only in 12 people (40.0%) these indicators were within the normal range. Indicators of normal adaptability prevailed in persons of the Group II (n = 43; 62.3%), and low adaptability was registered only in 20 persons (29.0%), ($\chi 2 = 8.504$, $p = 0.004$). In addition, in 6 people (8.7%) of Group II, the authors observed high rates of adaptability, while in Group I there were no such patients.

Moderate manifestations of maladaptability were 2 times more common in Group II (n = 46; 66.7%) compared with Group I (n = 8; 26.7%). In the analysis of a high degree of maladaptability, the ratio of groups II and I was inverse (n = 22 and n = 19) (73.3% and 27.5%), ($\chi 2 = 18.075$, $p < 0.001$). Low maladaptability was registered in a small number of subjects and only among persons of Group II (n = 4; 5.8%).

It attracted attention that when calculating the average score of self-rejection, all patients without defects and deformities of the nose had a high level of it (100%). In persons with minimal defects and deformations, this indicator was registered in different variations with a predominance of normal (n = 32; 46.4%), high (n = 25; 36.2%), ($\chi 2 = 34.435$, $p < 0.001$) and low (n = 12; 17.4%) values.

High severity of emotional discomfort was observed in the vast majority of subjects of Group I (n = 23; 76.7%) and only in one third of patients of Group II (n = 27; 39.1%), ($\chi 2 = 11.785$, $p < 0.001$). Patients in Group II experienced moderate emotional discomfort 4 times more often than in Group I (n = 42 and n = 7) (60.9% and 23.3%).

When studying one of the personality traits, internal control, a statistically significant difference was found in its high rate. Thus, an excessively high rate was observed in 11 patients (36.7%) of group I and only in 9 patients (13.0%) of group II ($\chi 2 = 7.238$, $p = 0.008$). In the vast majority of patients in both groups there was a normal level of internal control: 19 people (63.3%) of Group I and 56 people (81.2%) of Group II. And only 4 patients (5.8%) of Group II showed low internal control.

DISCUSSION

Our results are consistent with the data of other researchers and indicate that among those who turn to plastic surgeons for rhinoplasty, a significant proportion have mental disorders, including dysmorphophobic disorders of the body.

Thus, in a comparative analysis of clinical and anamnestic data were founded that persons who did not have cosmetic defects of the nose, sought to perform rhinoplasty to improve their social functioning, reffered 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. In these individuals, we diagnosed dysmorphophobic syndrome within hypochondriac disorder (F45.2).

Comparative analysis of pathopsychological characteristics showed that patients with dysmorphophobic disorder and without defects and deformities of the nose, who insisted on surgical correction, had a deeper severity of depressive symptoms and personal anxiety with a predominance of dysthymic character accentuation, low adaptability, complete intolerance of themselves and their appearance, a high level of emotional discomfort and internal control.

Based on the obtained data, we proved that such patients have no indications for surgery and require a special individualized therapeutic approach.

CONCLUSIONS

Given the lack of absolute indications for surgical intervention in this cohort of individuals, their efforts to achieve an ideal image solely through plastic surgery, to solve personal problems, to establish disturbed interpersonal relationships, to succeed in the professional sphere, and the results of clinical and psychopathological and pathopsychological characteristics of such patients, it is necessary to improve a comprehensive system of psychotherapeutic measures in combination with pharmacotherapy, in order to reduce psychopathological symptoms, improve the level of psychosocial functioning and create the preconditions for decision to abandon surgery.

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Conflict of interest:
The Authors declare no conflict of interest.

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