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Psychosomatic peculiarities of lipomas course in the maxillofacilal area

Dzhereley A. A., Romanenko I. G., Kryuchkov D. Yu., Gorobets S. M.

Federal State Autonomous Educational Institution of Higher Education "Crimean Federal University named after V.I. Vernadskiy" Medical Academy named after S.I.Georgievsiy

Dentistry Department

Summary

Patients with lipomas in the maxillofacial area show some types of psychological reactions. But the most focused attention of the doctor in the postoperative period is required by the patients of euphoric-anosognosic psychosomatic group due to the high level of compliance between psychological reactions and somatic indicators. Was determined of three psychosomatic groups: anxiety-obsessive-phobic, euphoric-anosognosic and harmonious. The most focused attention of the doctor in the postoperative period is required by the patients of euphoric-anosognosic psychosomatic group due to the high level of compliance.

Keywords: lipomas, maxillofacial area, psychological reactions, postoperative period.

Background.

Patients with lipomas in the maxillofacial area show 8 types of psychological reactions: anxiety-obsessive-phobic, neurasthenic, paranoiac, hypochondriac-egocentrical, euphoric-anosognosic, sensitive and ergopathic. The correlation between psychological reactions and somatic factors led to the formation of three psychosomatic groups among the patients with lipomas in the maxillofacial area: anxiety-obsessive-phobic, euphoric-anosognosic and harmonious. The most focused attention of the doctor in the postoperative period is required by the patients with euphoric-anosognosic psychosomatic condition due to the high level of compliance. The patients of anxiety-obsessive-phobic psychosomatic group reacted most evident somatically on tumor development in the body and coming surgical treatment in the form of high blood pressure in two hours before surgery up to 144 ± 0.34/93.3

± 0.3 millimeters of mercury, reduced prothrombin indicator up to 73.84 ± 0.78, i.e. up to 18.81 ± 0.63%, fibrin up to 10.92 ± 0.24 mg, per 5.51 ± 0.15 mg, lengthening of the clotting time in 1 min. 46sec ± 0.06, as well as reducing amount of total lipids of blood plasma, significant increase in the number of primary and secondary products of lipid peroxidation, severe postoperative edema, pain sense modality, increased local temperature in paravulnar zone. The number of patients with lipomas in the maxillofacial area in harmonious psychosomatic condition was very small and composed only 6 people, which corresponds to 8.7%. Clinical laboratory values of these patients correspond physiological norm: blood pressure lifted in two hours before surgery up to 130 ± 0.57/76.4 ± 0.69 millimeters of mercury, increased blood pressure on average was recorded to 7.6/5.6 millimeters of mercury. Prothrombin indicators significantly decreased up to 77.23 ± 0.9 to 6%, fibrin up to 0.42 mg, coagulation time extended by 31 seconds. Inflammatory changes had adequate volume and nature of surgical trauma, and the condition of the soft tissues in the area of surgical injury normalized to the fifth day of postoperative period. The results of study conducted by us suggest the reasonability of early diagnosis of psychological reaction of patients with lipoma in the maxillofacial area with the purpose of making the necessary corrections to the therapy complex for the prevention of development of intra- and postoperative complications, provision of optimal conditions for the process of wound healing and ultimately for obtaining aesthetically high results of treatment of surgical dental patients.

Fear of patients before surgery treatment, the problem of cancerophobia in dentistry are one of the main areas of psychological research in dentistry. This is confirmed by the literature data indicating emergence of different psychological attitude to the nature of his/her illness, coming surgery and treatment in general [1-12].

The development of any tumor, even benign, process in the human body is quite psychogenic-traumatic factor, and its development in the maxillofacial area enhances psychological reaction in many times. According to A.K. Iordanishvili (2007) the most common benign tumor is lipoma, which can be located anywhere in the human body, including cases of visceral injuries. The response of the patient to the development of tumor is determined by the type of psychological reaction and is aggravated by the fact that patients treat their disease in different ways [14-17].

The patients with tumors in the maxillofacial area have stable psycho-emotional pain position which is felt by them long before the surgery [18-23]. This fact explains that in the preoperative period there is a significant increase in energy consumption in the body of the patient and its mismatch to the level of energy production. This is consistent with data of A.F. Bizyaev, S.Yu. Ivanov, A.V. Lepilin (2000),

that in the climax of the psychoemotional stress the index oxygen usage is increases by an average of 17%, and causes the inclusion of the process of anaerobic glycolysis, which leads to the formation and accumulation of products of lactic and pyroracemic acids in the tissues, causing metabolic acidosis, with all its negative consequences. F.Z. Meerson (1981) confirms that such situation reduces the speed of tissues repair. Under the influence of stress factors on the body the processes of free radical oxidation in the cells increase, which can lead to disorganization of protection mechanisms [24,25]. This leads to increased membranes damaged processes, the strongest of which are phospholipolisys and lipid peroxidation [26,27].

However, many authors emphasize that anxiety, as a negative emotional condition, leads to maladjustment and to the emergence of neuropsychiatric disorders, delayed postoperative recovery [28-31].

Material and Research Methods

For participation in research there were selected patients with lipomas of the face and neck in an amount of 69 people demanding carrying out planned surgeries - removal of blastomas on the non-infected tissues without associated and shown somatic diseases, the age of the patients ranged from 20 to 63 years, there were 37 women and 32 men. The patients up to 50 years old dominated (79.7%) – i.e. in an age when cosmetic requirements to the disease outcome are particularly high.

At the initial examination we have identified tumor formations, the diameter of which was within the range of 1.5 - 5 cm. During examination the skin in the localization area of the pathological process had physiological color. During palpation examined formations were of dough consistency painless, mobile, not soldered to surrounding tissues. The surgical treatment - removal of tumors was performed only on the soft tissues at close injury rate level. For the comparison there were other other commeasurable conditions which accompanied the surgery: the quality characteristics of instruments, suture material, stitches. It was necessarily considered to infiltrate surrounding formation tissues preliminary with a solution of local anesthetic.

All the patients were required to conduct psychological tests by PQBI (Personality Questionnaire of Bekhterevskiy Institute) method before beginning of the treatment. In addition to conventional clinical and laboratory investigations, the severity of post-operative swelling and pain reaction, the condition of the wound and scar, control of blood pressure indicators, local thermometry, the definition of the condition of hemostatic system and lipid peroxidation were further investigated.

In assessment of the condition of scars we took into account: patients' complaints, the color of the scar, signs of hyper- or atrophy, tenderness during palpation, width, consistency, mobility. To estimate the width of the scar we used a scale of Popovich T.V. (1973). The inspection of the scar was performed in 6 months after the surgery. It is known that the width of scars depends on the intensity of inflammatory reactions in paravulnar zone and also to a certain extent, is determined by the nature of local topographical anatomical and functional characteristics. More noticeable scars are formed after the suture of wound on the skin of buccal and sternocleidomastoid area. At the same time, in the frontal, jugal, parotideomasseteric areas and in submandibular triangle the postoperative scars are usually more subtle. Our research confirms the existence of this consistency and considers it as a systematic measurement error.

Discussion of the research results.

It is certainly the fact that the form of the disease influences on the character of psychological reaction, that's why the patients with lipomas in the maxillofacial area have most commonly anxiety-obsessive-phobic reaction (50.72%). The continuous concern in respect of the unfavorable course of the disease, the risk of complications is distinctive for such patients. There is a thirst for more information about the disease. Some patients are worried about unrealistic and improbable complications of the disease. Concerns about the possible adverse impression to others are destinctive, which may cause social isolation of the patient.

This is explained by the fact that the word "tumor" for many patients was shocking, frightening, requiring a review of his/her further life, causing the possible restrictions of social activity, etc. In other words such situation can not be solved alone and this greatly increases the fear of patients to the situation which the patient can not structure, and that is the main component that determines the psychological reaction.

The second by frequency psychological reaction of the patients with lipomas of face and neck was euphoric-anosognosic reaction (23.2%).

The patients with such a psychological reaction have continually unreasonably high-spirits, often willfully. They pay scant attention to the disease and treatment. They violate regimen easily. Such patients often throw back thoughts of illness, of the possible consequences, deny the obvious things in

disease manifestations, attribute them to situational factors, refuse from examination and treatment. Such patients are characterized by avoiding disease saturating himself/herself in job.

The third position was taken by the patients with a harmonious psychological reaction (8.7%). For the patients with such a psychological reaction a sober assessment of their condition is typical, with no inclination to exaggerate its severity, but without underestimating the severity of the disease.

The results of psychological tests have shown that the psychological reactions of the patients with lipomas in the maxillofacial area are varied and presented by 8 types (table No. 1).

Table 1

Distribution of the patients with lipomas in the maxillofacial area by types of psychological reaction

Psychological reaction	Total number of patients
Anxiety-obsessive-phobic	35 (50.72%)
Euphoric-anosognosic	16 (23.2%)
Sensitive	4 (5.8%)
Harmonious	6 (8.7%)
Neurasthenic	4 (5.8%)
Ergopathic	1 (1.5%)
Paranoiac	2 (2.9%)
Hypochondriac-egocentrical	1 (1.5%)

Our research has shown that similar psychological reactions were accompanied by identical changes in clinical laboratory values, which served as justification for a formation of more intensive psychosomatic groups.

The anxiety-obsessive-phobic psychosomatic group (42 people - 60.92%) included patients with neurasthenic paranoid and hypochondriac-egocentrical psychological reactions. For this psychosomatic group a tendency to a significant increase in blood pressure before surgery up to 21 ± 0.31/18 ± 0.3 millimeters of mercury on average was typical. The same trend was also typical for indicators of blood coagulation. The average indicators of prothrombin in group decreased by 18.81 ± 0.63%, of fibrin – 5.51 ± 0.15 mg, coagulation time was extended by 1 minute 46 seconds (106 seconds ± 0.059 seconds).

The patients in this group had a significant reduction in total blood plasma lipids and the growth of primary, secondary products of lipid peroxidation, and consequently the increase of level of the local inflammatory response, which further throws tissues of paravulvar zone in the condition of acidosis. Thus the level of total lipids of blood plasma before surgery amounted to 4.96± 0.028 conventional units/mg of lipids. Swelling, pain, and local temperature in paravulnar zone on average amounted to 2.26 ± 0.051 points during the 1st day of observation, 2.32 ± 0.089 on the 3rd day, 1.56 ± 0.077 on the 7th day. Indicators of local thermometry are shown at Figure 1.

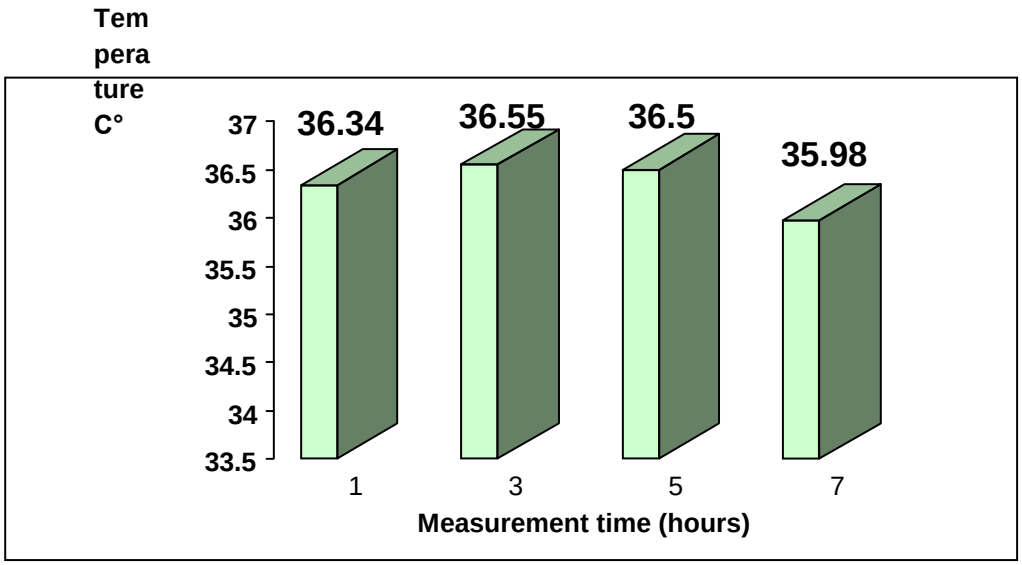

Figure 1. Dynamics of the local temperature of the patients with lipomas in anxiety-obsessive-phobic psychosomatic group.

The indicators of postoperative scar width in 6 months corresponded to: small – 13 people (18.8%), medium scar – 20 (28.9%), wide – 36 (52.2%).

The euphoric-anosognosic, sensitive and ergopathic reactions were observed among the patients with lipoma in maxillofacial area in 30.43% of cases (21 persons). For the patients of this psychosomatic group a slight increase of blood pressure up to 9.8 ± 0.31/3 ± 0. 45 millimeters of mercury was typical in 2 hours before surgery. The average prothrombin indicator of such patients decreased before surgery up to 7.56 ± 0.82%, of fibrin - to 0.34 ± 0.13%, blood clotting time lengthened only up to 19 ± 0.1 seconds. Increase of processes of lipid peroxidation was significantly weaker. Thus the level of total blood plasma lipids before surgery was (5.51±0.028 conventional units/mg of lipids). The indicators of the local inflammatory response of these patients were more significant. The features of such

psychological status determine a tendency to elongation of the postoperative period due the to evident edema, increased local temperature, which we observed in our research. Thus the intensity of local temperature during the first day after surgery corresponded to 34.5 ± 0.23°C. In the following days the intensity of index of local temperature was maintained at a sufficiently high level (35.6 ± 0.08°C on the 3rd day, 35.4 ± 0.16°C on the 5th day), to the seventh day it was above the norm at 1.1°C. Such dynamics of the indexes of local thermometry is determined, in our opinion, by a high level of compliance.

The indicators of postoperative scar width in 6 months after surgery were similar to average values and corresponded to: 16 people with small and 16 people with medium scars of (23%), 18 people with wide ones (20.09%).

The harmonious psychosomatic condition (6 people - 8.7%) is a variant of the norm, which is characterized by certain standardised indicators defined by us. The harmonious psychosomatic condition is characterized by high blood pressure in two hours before the surgery up to 130 ± 0.57/76.4 ± 0.69 millimeters of mercury, i.e. the average indicator of blood pressure increased by 7.6 ± 0.48/5.6 ± 0.27 millimeters of mercury; by decrease of prothrombin up to 77.23 ± 0.9, of fibrin – up to 10.08 ± 0.17 mg; elongation of blood clotting time is not more than by 31 seconds. For the patients with this type of psychosomatic condition a minimum reduction in total blood plasma lipids up to 5.22±0.02 (3rd day after the surgery) is typical, and consequently increasing the primary and secondary products of lipid peroxidation. Inflammatory changes had adequate volume and nature of surgical trauma, and the condition of the soft tissues in the area of surgical injury normalized to the fifth day of postoperative period. The level of post-operative swelling and pain sense modality corresponded to 0-1 point. The level of local temperature was as close as possible to the norm – 34.32 ± 0.1, 34.7 ± 0.1, 34.21 ± 0.1, 33.8 ± 0.06 from the first to the seventh day, respectively. The result of surgical treatment was a thin normatrophic scar with a width in the range of: 1 – 1.2 ± 0.2 mm.

Conclusions:

1. It was determined that among patients with lipomas in maxillofacial area there are 8 types of psychological reactions: anxiety-obsessive-phobic, neurasthenic, paranoiac, hypochondriac-egocentrical, euphoric-anosognosic, sensitive and ergopathic.
2. The correlation between psychological reactions and somatic indicators was determined, which led to the formation of three psychosomatic groups within the patients with lipomas in maxillofacial area: anxiety-obsessive-phobic, euphoric-anosognosic and harmonious.

3. The most focused attention of the doctor in the postoperative period is required by the patients of euphoric-anosognosic psychosomatic group due to the high level of compliance.

4. The patients of anxiety-obsessive-phobic psychosomatic group react most evidently somatically on tumor development in the body and coming surgical treatment

5. The conducted research points out the necessity of development of psychocorrective activities which should be included to the course of treatment of lipomas of maxillofacial area.