

UDC 616.742/743 – 003.92 – 071

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**EXPERIENCE OF IMPROVING THE COMPREHENSIVE EXAMINATION
OF PATIENTS WITH HEAD AND NECK SCARS
ДОСВІД УДОСКОНАЛЕННЯ КОМПЛЕКСНОГО ОБСТЕЖЕННЯ
ПАЦІЄНТІВ ІЗ РУБЦЯМИ ГОЛОВИ ТА ШИЇ
(СЛОВАЦЬКА МОВА) ДОСВІД УДОСКОНАЛЕННЯ КОМПЛЕКСНОГО
ОБСТЕЖЕННЯ ПАЦІЄНТІВ ІЗ РУБЦЯМИ ГОЛОВИ ТА ШИЇ**

SUMMARY

The paper presents the algorithm of comprehensive examination of thirty-seven people with head and neck scars. Clinical examination of patients was supplemented with ultrasound diagnostics of scar area and evaluation of emotional status. The relationship between clinical data and sonographic parameters allows the reliable determining of the type of scar. The detected psychoneurotic disorders arising against the background of existing cosmetic defect can act, according to the authors, as an additional factor for complications of the disease. Therefore, these patients often need psychological rehabilitation in the process of scar treatment. The results of the research extend the possibilities to design the pathogenetically justified treatment of patients with head and neck scars, and enable to use this diagnostic system for assessing the dynamics of change in the correction of scar-modified tissues.

Key words: head and neck scars, comprehensive examination, supersonic investigation, evaluation of emotional status.

АНОТАЦІЯ

У статті представлений алгоритм комплексного обстеження тридцяти семи осіб із рубцями голови та шиї. Клінічне обстеження пацієнтів доповнювалось ультразвуковим дослідженням зони рубця та оцінкою психоемоційного стану. Співвідношення між клінічними даними та ехографічними показниками дозволяє достовірно визначити тип рубця. Виявлені психоневротичні порушення, що виникли на фоні існуючого косметичного дефекту, можуть виступати, на думку авторів, додатковим фактором ускладнення перебігу захворювання. Тому досить часто такі хворі потребують психологічної реабілітації хворих у процесі лікування рубців. Отримані результати дослідження розширюють можливості розробки патогенетично обґрунтованого лікування хворих із рубцями голови та шиї, а також використовувати даний діагностичний комплекс для оцінки динаміки змін в ході корекції рубцевозмінених тканин.

Ключові слова: рубці голови та шиї, комплексне обстеження, ультразвукове дослідження, визначення психоемоційного статусу.

The relevance of the problem. Diagnostics and treatment of scar formations of facial skin, resulting from planned and urgent surgical interventions, burns and mechanical injuries, remain relevant and socially significant issues of modern maxillofacial surgery [1, p.32; 8, p.61]. Noteworthy is the fact that the number of patients appealing with this problem to the surgeons, dermatologists, and cosmetologists increases every year. This is not only due to increasing aesthetic demands of the society to the person's external appearance, but also, and mainly, due to the fact that in the structure of scar skin defects, the leading place occupy scars with severe cosmetic defects – hypertrophic and keloid, which can significantly reduce the patient's life quality [5, p.59].

The formation of pathological scarring in the maxillofacial region is often accompanied by the presence of symptoms such as pain, burning, paresthesia, itchiness, contracture. Besides, being located in open areas of the body, scars can cause serious psycho-emotional disorders in the form of lower self-esteem, anxiety,

depression, which negatively affects the social adaptation of the patient in the society. In its turn, the ever-present psychological stress has a negative effect on the somatic health of the patient in general, including intercurrent psychosomatic diseases such as angina and hypertension [10, p. 50].

Currently, conventional algorithms for selecting methods of treating patients with scars are available. The development of such algorithm is difficult due to the uncertainty of criteria for the differential diagnosis of various types of scars [2, p.56]. Despite significant pathogenetic and morphological differences of scarring, some of their types often have clinically similar features, resulting in a significant number of diagnostic errors [11, p.53]. In its turn, carrying out the treatment without taking into account the clinical and morphological structure of scarring usually leads to the lack of tangible therapeutic effect, recurrence and increased growth of scar tissue [7, p.71].

Biopsy allows to verify the diagnosis, but obtaining biopsy material prior to the treatment is difficult because it can cause excessive growth of scar. Therefore, this method of diagnosis is expedient only in rare cases [3, p.19]. At present, the scientific interest is focused on the study of anatomical structures in vivo using non-invasive methods, one of which is ultrasonography (US). This method allows to objectively, informatively and safely assess many tissues, including the skin [6, p.28]. Positive results of the use of ultrasound for the study of skin changes in psoriasis, dermatitis, vitiligo, age-related changes, and malignancies offer great opportunities for the application of this method in order to determine the morphological structure of the scar tissue.

It should be noted that the majority of works devoted to the diagnosis and treatment of scars pay attention to the direct impact on the area of the scar. At the same time, patient's general condition is insufficiently studied. Thus, the fact of formation of different morphological types of scar in one and the same place during operation in different periods of patient's life is known, which is caused, according to the researchers, by macrostate of the body [10, p.51].

In this regard, the issues of mental and emotional state which plays an important role in tissue regeneration processes during the reconstructive operations remain out of focus of the researchers' attention.

Given the importance and diversity of facial functions, many of which are involved in the implementation of person's communication needs, the low results in meeting the scar-modified human demands, and high frequency of low performance to eliminate scar-modified tissues of the maxillofacial region are alarming indeed. That is why the development of a clear algorithm of comprehensive examination of this category of patients is of particular importance for determining the tactics of their treatment.

The aim of the research was to improve the assessment of patients with scars of head and neck due to determining structural and functional features of the scar-modified tissues based upon clinical and ultrasound examination, as well as on introduction of mental and emotional state assessment into the diagnostic algorithm.

Objects and methods of the research. Thirty-seven persons aged from 23 to 48 with scar changes of head and neck were examined, with average terms of scar tissue development from 5 months to 1.5 years. Clinical examination, in addition to studying the general characteristics of the scar, included the detailed assessment of the sensitivity of skin in the area of scar-modified tissue and symmetrical unaffected areas. Further analysis of the structure of scar-modified tissue was performed using ultrasound on the unit Nemio MXSSA 590A (Toshiba). Mental and emotional state assessment ("MINI-MULT" questionnaire) was also an integral component of the clinical examination of patients with head and neck scars [4, p.73-80].

Results of the research. Patients who were under our observation, identified a cosmetic defect as the chief complaint due to the presence of the scar on the face and neck. In addition, 15 patients (40.5%) also complained of pain of varying intensity, burning, itching, numbness and feeling of "pins and needles" in the area of scar-modified tissue.

At the moment of examination, 7 patients (18.9%) had flesh-coloured scars not protruding above the skin surface, with preserved sensitivity and elasticity close to

normal tissues. In these patients, the preliminary diagnosis of normotrophic scar has been clinically made.

22 patients (59.5%) had scars of bright red colour of epidermis, with a rough surface, sometimes with small or large nodules in the depth of the scar. Scars were above the level of healthy skin up to 4 mm and were covered with scaly epithelium, tight at palpation. In the area of scar-modified tissue, there was an increase of tactile, thermal and pain sensitivity. In these patients, the clinical picture of scarring allows to make the preliminary diagnosis of hypertrophic scar.

8 patients (21.6%) had scars of purple-bluish colour with some patches of hyperpigmentation, with smooth and shiny or bumpy surface. Scars were wider than their bases and hung on the edges of healthy skin. In these patients, the decreased tactile and thermal sensitivity was detected in the significant increase of pain sensitivity in the scar region as compared to the unaffected symmetrical skin areas. These clinical signs indicated the presence of keloid scar in these patients.

During ultrasound examination, in all patients thickening of scar tissue as compared with normal skin was found. At the same time, in 7 patients with clinically diagnosed normotrophic scar, the scar area itself did not differ echographically from ultrasound picture of the healthy dermis.

Scar tissue in 22 patients with clinically diagnosed hypertrophic scar was thickened considerably more than in normotrophic cases. The structure of the scar area was heterogeneous; connective tissue fibers were evenly distributed. In addition, the area of reduced echogenicity was defined with relatively clear and smooth contours. At the same time, the boundaries between scar-modified and normal skin were clear.

In 8 persons with clinically diagnosed keloid scars, the scar area itself was characterized by significantly greater thickening of the dermis than in hypertrophic scars, as well as by unevenness of thickness and echogenicity with the predominance of low echo-density sites without clear structural differentiation. Noteworthy is also the lack of clear boundaries between the scar and normal tissues. Correlation of

clinical and ultrasonographic parameters of scar-modified tissue allowed to establish the presence of normotrophic scar in 7, hypertrophic – in 22, keloid – in 8 patients.

Particular attention in the clinical observation of patients with head and neck scars was paid to the study of their mental and emotional state. At the same time, we proceeded from the fact that, on the one hand, the ever-present stress associated with the occurrence of facial defect of course cannot affect the state of the patient's psyche, but on the other hand – the individual features of the patient's psyche in a certain way can affect the characteristics of the scar and the effectiveness of treatment.

Data collected using the “MINI-MULTI” questionnaire revealed that the majority of patients (29 men (78.4%) against the background of long-existing cosmetic defects, had obvious symptoms of psychoneurotic disorders. In particular, 12 patients (32.4%) had impaired mood, along with severe emotional lability, anxiety, irritability, apathy and reduced component of the struggle with the disease; in 11 patients (29.8%) fatigue, impatience, lack of confidence in the favourable outcome of the disease were observed; in 4 patients (10.8%) frequent changes of mood, desire to attract attention, theatrical behaviour were detected; in 2 patients (5.4%) obsessive fears, doubts about the correctness of treatment, reduced component for controlling the disease were present.

The results confirmed the hypothesis as to the presence of symptoms of psychoneurotic disorders in the majority of patients with head and neck scars arising from the existing cosmetic defects. In our opinion, they serve as an additional factor in the complications of the disease, and chronic stress and depression can cause an imbalance between the components of the immune response. It is well established that the onset of the most severe scars – keloids – comes amid a decrease of systemic immunity [9, c.102]. Therefore, the need for psychological rehabilitation of patients with head and neck scars is obvious, and in cases of severe depression, it is necessary to prescribe medications in collaboration with psychoneurologists.

Conclusion. Thus, the comprehensive examination of patients with scars of the maxillofacial region, providing the mandatory ultrasound, is an effective method of non-invasive differential diagnosis of normotrophic, hypertrophic and keloid scars

allowing to evaluate the changes in scar-modified tissues in dynamics. It also seems appropriate to include the psychodiagnostic methods into comprehensive examination of patients with head and neck scars in order to determine the psychocorrection activities aimed at forming positive motivation in relation to treatment. Such a comprehensive approach to the examination of patients with scars of the maxillofacial region ensures optimal choice of treatment method and achieving the maximal therapeutic effect.

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