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CLINICAL ANALYSIS OF THE DYNAMICS OF CHANGES SCAR TISSUE CHANGES AT DIFFERENT STAGES OF PREVENTING PATHOLOGICAL SCARS OF HEAD AND NECK

The work is a fragment of R & D Department of Operative Dentistry and Maxillofacial Surgery with plastic and reconstructive surgery of the head and neck – «Optimization of conservative and surgical treatment of patients with defects and deformations of the tissues of the maxillofacial region, № State registration №0110U004629.

Breaking the skin leads to scarring. Regulation of the process depends on many factors. Factors due to the depth and area of damage, for a period of wound healing process, the cause of the traumatic agent, decreased immunity, endocrinopathy, anemia, impaired associative microflora, reducing microcirculation and local hemodynamics [1-3].

Many authors have focused on the notion of «a tendency to form», but did not cover the fundamental determination of this term [4].

Abnormal scars were divided into three groups: a real keloid, false keloid and hypertrophic scar. This keloid occurs for no apparent reason, which gives reason to think about the predisposition to develop it for individuals. Unreal keloid can occur at any pre-damaged area of the body and on the site of the former scar with the transition to healthy skin [5, 6].

We have justified the term' tendency to pathological scarring with clinical, morphological and genetic point of view [7-12].

The aim of the work was to develop an optimal method of preventing postoperative pathological scarring in patients who are prone to their formation.

The object of the study: 18 patients who were treated after the planned interventions are prone to abnormal scarring.

To prevent the formation of pathological scars carried in scar injection

drug «Lipin» № 5, rubbing cream «Dermofibraze» 3 times a day. After 3 months of maturation of the scar electrophoresis preparation « Lipin» № 10 per day with a traditional phonophoresis of hydrocortisone in a day, massaging cream «Dermofibraze». After 6 months, a refresher prevention by electrophoresis solution «Lipin» in the above procedure while Ultraphonophoresis cream «Dermofibraze» № 15 per day. Repeated preventive measures were carried out with 9 months.

For the clinical assessment of the dynamics of scarring at the stages of prevention, namely 3, 6, 9, 12 months, we used table that characterized the formation of scars on five criteria: a sign of P1 – the type of scar, a sign of P2 – the consistency of the scar, a sign of P3 – the color of the scar, a sign of P4 – the sensitivity of the scar, a sign of the P5 – the area of the scar.

To determine the elastin gene polymorphism in exon 20 g28197 A> G we carried out the selection of genomic DNA from venous blood of the subjects with a set of «DNA -express– blood.»

We conducted a morphological study was aimed at identifying the histological features of the structure of pathological scarring and changes in the process of prevention.

Results and Discussion. In the study of the dynamics of clinical changes found that the application of prevention in patients with viyalenim elastin gene polymorphism, the most positive changes in observed parameter P2 – the consistency of the scar, especially after three months of preventive measures. At the 12 month a sign of normal consistency of the scar was observed in 9 (50%) patients. The slowest rate unchanged P4 the sensitivity of the scar from 3 to 9 month prophylaxis with preservation of this parameter to 12 months of prophylaxis. 12 month scar strength characteristics defined in 8 (45%) patients. Changing the parameter P1 – type of scar indicates deterioration of this indicator between 6 and 9 months of prophylaxis, but a significant decrease after 3 stages. After 12 months in 6 (34%) patients had a homogeneous hypertrophic scar and 2 (11%) patients with hypertrophic scar nodules. Signs of normal atrophic scar formation were observed in 9 (50%) patients. Indicator P5 – the area of the scar, which significantly decreased from 3 to 6 month prophylaxis after which the parameter remained unchanged. At month 12 was a sign of the first stage 16 (89%) patients. In 2 (11%) of the patients was determined the mean area.

Significantly decreased P3 parameter – the color of the scar. The most significant trend was observed from 3 to 6 month prophylaxis followed by a slow decrease after his 2 and 3 stages of preventive measures. At month 12 healthy skin features defined in 15 (84%) patients.

Analysis of allele frequencies showed that the G allele was significantly more common in patients who are prone to abnormal scarring. We found a significant relationship between the presence of the polymorphic allele G and an increased risk of abnormal scarring.

Immunohistochemical study of histological sections of scars from patients diagnosed with elastin gene polymorphism markers using established that epithelial cells are found, which on its surface to marker 3 expressing CD and CD 68 respectively, and have intraepitelialnimi

T– lymphocytes and macrophages and makrkera Key 67 confirmed a significant proliferative activity of fibroblasts.

Conclusion. Thus, the analysis of the dynamics of changes in clinical parameters characterizing the formation scar modified tissues showed that all of them reach the descent after our method of prevention. Patients are prone to abnormal scarring a statistically significant indicator of normal atrophic scarring in 11 (53%) patients.

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