

The Optimal Scars of Facial Skin Wounds, Operational Technique and Conditions Used for Healing

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Abstract

We were aimed to achieve cosmetically and functionally acceptable scars after surgical operation in case of facial skin wounds. 36 consecutive patients with facial skin wounds were selected for study. They underwent restorative surgical operation. Wounds were processed by the method elaborated and suggested by us. Among these 36 patients 11 had traumatic cutaneous wounds and 21 had postoperational wounds. Dexasone with the dose of 4 to 8 mg or dexamethasone were administered in wounds. In the process of suturing magnifying glass (binocular lens - with magnification 6x) was used and wounds were sutured with the use of subcuticular continuous suture that had been modified by us. The operational technique was as following: needle pricking was performed at the epidermal and dermal border vertically, through the full thickness of the dermis and then pricking out on the opposite edge of the wound at the same level and depth. After removal of sutures, the scars were processed by Contractubex ointment applications. In all cases wounds were healed by first intention.

Keywords: *wound, scar, healing, subcuticular continuous suture, Contractubex, dexamethasone*

Introduction

Postoperational scars of facial region have to meet the great cosmetic requirements. Postoperational scars of facial and neck regions are considered cosmetically successful if they are even and indistinguishable from surrounding tissues by color, density and do not result in shifting or mismatch of nearby formations.

The facial skin wounds by origin are of two major kinds: operational and traumatic. Esthetic demands to either etiologic type of wounds are the same. Frequently, the postoperational wound edges are uneven, infected, with various size and direction.

During surgical manipulations skin section is performed with the use of the sharp instruments considering orientation of collagenous fibers, Langer's cleavage lines and natural folds. In case of traumatic cutaneous wounds, the above-mentioned principles are

disordered. Consequently, the wound's processing and gaining of the perfect cosmetic effects is quite difficult.

The two main types of suture have been used in case of facial skin wound suturing:

1. Interrupted or continuous suture of the skin surface;
2. Subcuticular continuous suture;

The negative side effect of the superficial interrupted or continuous sutures is the small-sized remnants of scars that have been left after pricking by the surgical needle. These scars remain through the life-span. In order to avoid and prevent aforesaid negative effect the subepidermal continuous suture must be placed. Mentioned manipulation allows scars to be a soft and linear.

Course of the healing process and visual side of the scars are determined by variety of internal and external

factors, but principally the three general moment is important - surgical technique, used instruments and sewing material, also state of tissues in the area of the wound (the local manifestation of the organism's common state).

If we want postoperational scars be less conspicuous, sutures must not be placed far from the wound edges. Along with that, the exact matching of wound edges is required. During suturation, overlapping or inversion of wound edges is impermissible.

Material and Methods

Taking these factors into consideration and using the certain modifications, the facial skin wounds have been processed and tried on 32 patients with operational, and traumatic wounds as well. Of the 32 patients 23 were men and 9 women. Among them 11 patient had traumatic injury and 21 had postoperational wounds.

Skin wounds in all cases were sewed by subcuticular continuous suture that has been modified by us. Before suturation, dexasone or 4 to 8 mg dexamethasone dissolved in anesthetic substance (in case of local anesthesia) or in water (in case of general anesthesia) was administrated in wound.

The local use of corticosteroids interferes with formation of an excessive amount of scar tissue, and according to several authors' suggestions, it will prevent development of inflammatory complications.

For exact matching of wound edges, the wounds were processed with the use of magnifying glass (binocular lens - with magnification 6x)

The monofibrillar synthetic threads (4/0; 5/0; rarely 6/0 in case of lips red margin, floor of the auricle) were used for suturing.

In case of deep wounds, cutaneous defects were restored with the same non-traumatic synthetic threads, in accordance with layers, including the subcutaneous fat.

Needle pricking was performed in wound's canal, at one of the ends of the wound. The free end of the thread (3 to 4 cm) was left outside. Under the magnifier, needle was pricked at the epidermal and dermal border vertically, through the full thickness of the dermis. Pricking out on the opposite edge of the wound at the same level and depth was followed. Without epidermal damage the vertical loop was created.

After placing of each loop, assistant makes wound edges to come close with the use of single-toothed hook, simultaneously holding the thread in strained position. Using of thumb forceps is not recommended, since it may cause skin disorder with farther development of marginal necrosis.

Post-suture loop is placed continuously at a distance of 0,5 cm. In case of tissue reaction, the connective tissue capsule is formed around the monofibrillar synthetic thread. That's why, during removal of suture the complete and easy removal of long treads is labored. Because of it, in case of long wounds, after certain distance the thread is removed outside as a loop and is fixed on the torus, thereafter thread is inverted in the wound again.

Sutures are removed by 7th or 8th day. On the background of corticosteroids prolongation of healing process was not detected.

After removal of sutures, the scars were subjected to Contractubex ointment applications (during 2 to 3 weeks, applications, rub in or phonophoresis).

Results and Discussion

In all cases the wounds were healed by the first intention producing soft and esthetically acceptable scars, which were practically indistinguishable from surrounding tissues.

Thus, usage of magnifier and vertical loops in case of subcuticular continuous sutures, administration of corticosteroids in wounds, and at last application of Contractubex ointment after suture removal are indispensable conditions for gaining of cosmetically acceptable scars in facial region.

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Оптимальные рубцы лицевых ран, операционная техника и условия для заживления ран

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Р Е З Ю М Е

Цель исследования - образовать косметические и функционально приемлемые рубцы операционной раны. По предложенному нами методу лицевые раны были обработаны 32 пациентам, из них 11 пациентов получили травматические повреждения, 21 – имел операционную рану. В рану вводили 4-8 мл дексазона или дексаметазона. При наложении швов использовали лупу (увелечение - 6 раз). Рану ушивали внутрикожным непрерывным швом, модифицированным нами. Техника наложения швов: шов начинали на одном конце раны (конец нити захватывали инструментом), иглу вкалывали на границе эпидермиса и дермы вертикально, на всю толщину дермы; выкол производили на другой стороне, на том же уровне и толщине. Получали вертикальную петлю без повреждения эпидермиса. Швы снимали на 7-8-ой день. После снятия швов на рану накладывали контрактубекс в виде аппликаций, втираний или фонофореза. Во всех случаях раны заживались первичным натяжением и образовывались гладкие, эстетически и функционально приемлемые рубцы, которые практически не отличались от близлежащих тканей.

Ключевые слова: *рана, рубец, заживление, внутрикожный непрерывный шов, контрактубекс, дексаметазон*