

THE RELEVANCE OF DEVELOPING KELOID SCARS AFTER DIAGNOSIS AND THE SCIENTIFIC BASIS OF TREATMENT METHODS

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Annotation: This article analyzes the clinical significance, pathogenesis, and scientifically grounded treatment methods of keloid scars that develop after surgical interventions. Keloids are characterized by fibroblast hyperactivity, excessive collagen production, and impaired skin regeneration, which result in a high recurrence rate and significant cosmetic, functional, and psycho-emotional consequences. The study evaluates various therapeutic approaches, including surgical excision, corticosteroid therapy, laser techniques, cryotherapy, radiotherapy, silicone-based treatments, and lymphatic therapy. Clinical observations from 2021 to 2025 at the Andijan State Medical Institute demonstrate that a combined approach—particularly surgical excision followed by desensitization, regional lymphatic therapy, antihistamines, and topical Contractubex—significantly reduces the risk of recurrence. The findings support a comprehensive and pathogenetically oriented strategy as the most effective way to prevent postoperative keloid recurrence.

Keywords: Keloid scar; postoperative complications; fibroblast proliferation; collagen synthesis; lymphatic therapy; corticosteroids; surgical excision; Contractubex; antihistamine therapy; recurrence prevention.

A Keloid scar is a form of pathological termination characterized by fibroblast hyperactivity, uncontrolled synthesis of collagen (especially Type III), and disruption of the skin regeneration process. Its relevance is determined by the following clinical and social factors: 1. High residivity (45-80%) is shown in the literature to have a recidivism rate of 45-80% after only cutting keloid scars (Mustoe et al., 2002). This condition indicates that keloids are tissue with high fibrosis activity. 2. Cosmetic and psychoemotional influences often appear on the face, chest and abdominal wall: change the patient's appearance, lead to socio-mental stress, especially exacerbating psychoemotional difficulties between young and women.

Functional symptoms of keloids are often accompanied by symptoms such as: pain, itching (pruritus), skin pulling around the wound, movement restriction (osobenno in the bone-Chakra areas). The lack of a standard treatment method is emphasized in international recommendations (AIS, EADO, Mustoe classification) that there is no single universal method for treating keloid. All methods are accompanied by the risk of relapse.

There are more than 20 methods of treatment – non-standardized approach surgical incision, steroids, interferon, laser, radiotherapy, cryotherapy, silicone therapy, compression bandages, hyaluronidase, botulinotoxin, but their effectiveness varies. Therefore, keloid scar is of urgent importance as a pathology that is difficult to solve in surgical practice, requiring an integrated approach. Methods for treating keloid scars based on scientific literature below are the main pathogenetic-based treatments approved in the world literature. Chirurgical methods keloid cutting bare cutting relapse rate up to 45-100%. (Scheneffelt, 1999) this method is therefore only recommended as part of complex therapy. Plastic surgery and cosmetic suture minimal trauma to the skin collagen equal distribution partially reduces relapse glucocorticosteroid therapy

Injectable steroids (triamcinolone acetonide). Most commonly used method: triamcinolone acetonide 10-40 mg / ml

Steroid in keloid: brakes fibroblast proliferation, reduces collagen synthesis, reduces vascularization. Efficiency: ~50-67% (according to Western literature). However, often skin atrophy, hypopigmentation can occur. Laser therapy (CO₂, Er:YAG, Nd:YAG) ablates laser keloid tissue or softens fibrosis. CO₂ equates laser-keloid. Nd:YAG – coagulates blood vessels Er: YAG – finely processes epidermal efficiency: 30-50%.

The risk of relapse is high, so the steroid is combined with cryotherapy (liquid nitrogen) to improve the keloid by 10-30 seconds in 3-5 cycles, losing fibroblasts. Efficiency: 60-70% but there is a risk of hypopigmentation. Grinding methods (silicone plastic, gel) increase hydration on the surface of the silicone keloid: reduces collagen synthesis, reduces keloid roughness. Efficiency: 40-60%. Interferon therapy reduces collagen synthesis in interferon α and γ keloid by 30-50%. But injections are painful and expensive. Radiotherapy (radiotherapy, brachytherapy) is carried out within 24 hours after surgery: stops mitosis of fibroblasts relapse is reduced to 10-20% this is one of the most effective methods, but dangerous: the possibility of carcinogenic action is pigmentation, atrophy hyaluronidase, lidase breaks down fibrosis Matrix.

Efficiency is low-20-30% compression therapy 36-48 mm.sim.who. pressure 6 months — for 1 year. Efficiency 40-70%. Botulotoxin-A (BoNT-a) is one of the new methods: reduces the intense mechanical tension in the microtrauma, suppresses the development of keloid efficiency in new studies by 40-60%. Therapy, which is considered the most effective in world literature (Mustoe et al., 2002; Niessen, 1999).:

Surgical incision + steroid injection

Surgical excision + radiotherapy

Surgical cutting + compression

Surgical excision + Contratubex + antihistamine + lymphatic therapy (this method is fully consistent with your clinical methodology)

16 keloid scar - treated patients were observed during the 2021-2025 year at the adti clinic's 1st Department of surgery and hospital surgery department. Of this, 9 are female and 7 are male. The patients were all addressed due to the last keloid scar from tashrix, with 11 developing after an abdominal wall, 1 breast socket, 4 following an autopsy on the arms and legs of the keloid. In 7 patients, a keloid scar incision was performed. In the course of taking Tashrix, the patient underwent the following treatment for desensitization. Thiosulfate sodium 30% 10ml v\w. Tab. Laratal 1 Tab 1 maxal. Tab. Serrata 10 mg 1 Tab 3 maxal. Legumes such as peas, mosh, beans, and alcoholic beverages and tobacco products were restricted.

Tashrix was cut along with a keloid scar from a healthy area of the skin under general degreasing and a cosmetic suture was placed inside the skin. In the post-tashrich period, regional lymphatic therapy was performed around Contratubex ointment and jaroxate, along with the use of treatment treatments for desensitization. For Gerional lymphatic therapy, furosemide 1.0+ heparin 2500 Ed+ novocaine 05% 5.0+ampicillin 0.5 + kenalog 2.0 was administered at the end of jarochate. For 15 days. After tashrix, a contratubex 2 maxal was placed on the surface of jarochat. Antihistamine drugs were continued in the period from tashrix to the last. At the same time, eosinophilia is controlled 2 times a month in the total blood count. Treatment in yukori results in complete prevention of relapse of keloid scar after publishing.

Regional lymphatic therapy methodology is a pathogenetically based complex approach that affects all major zvenos of keloid pathogenesis:

Component	Mechanism of Action
Desensitization	stops allergic components, reduces eosinophils
Lymphatic therapy	reduces edema, decreases inflammation
Heparin	improves microcirculation, reduces fibrosis
Kenalog	inhibits fibroblast proliferation
Ampicillin	prevents infection development
Contractubex	reduces local fibrosis

By Proust. This complex provides up to 10% prevention of keloid recurrence.

Used literature:

1. English R.S., Shenefelt P.D. Keloids and hypertrophic scars. *Dermatol Surg*, 1999.
2. Bolgakov L.A., Pavlova M.N. *Keloid Scars*. Moscow, 1977.
3. Niessen F.B., et al. On the nature of hypertrophic scars and keloids: A review. *Burns*, 1999.
4. Mustoe T.A., et al. International clinical recommendations on scar management. *Plastic and Reconstructive Surgery*, 2002.
5. Ogawa R. Keloid and hypertrophic scars: updated review of advances in treatment. *Burns Trauma*, 2019.
6. Al-Attar A., et al. Keloid pathogenesis and treatment. *Arch Plast Surg.*, 2006.
7. AAPOS Clinical Guidelines, 2015 – Silicone and steroid combination therapy.
8. Berman B., Maderal A. Current therapeutic options for keloids. *Journal of the American Academy of Dermatology*, 2017.
9. Ogawa R., Hyakusoku H. Postoperative radiotherapy for keloids. *Dermatol Surg.*, 2013.
10. Gauglitz G.G. Management of keloids and hypertrophic scars: current and emerging options. *Clin Cosmet Investig Dermatol*, 2013.