

DIRECT TISSUE EXPANSION IN SURGICAL TREATMENT OF BURNS AND BURN AFTER MATH FOR CHILDREN

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Introduction. Surgical treatment, of burns and deformed scars on children, is required even after many years after the trauma, often during the whole growth period of the child. Reconstruction of the profound tissue defects (disclosure of the cranial bones, joints, functional structures of the extremities) presents serious difficulties.

The reconstruction method through direct tissue expansion of the intact tissues, bordering with the defected one, allowed coverage with functional tissue, which proved its efficiency in treatment of burns and their aftermath.

Materials and methods. During the past 15 years (2002-2017) in the Department of Burns and Plastic surgery, there were treated 58 patients (7-18 years old) with the method of direct tissue expansion:

1. Profound thermal burns – 8
2. Electric burns – 10
3. Post burn alopecia – 32
4. Scar deformations of head and neck - 6
5. Scar deformations of the extremities – 2

Results. With 41 patients were obtained good results; with 14 – satisfactory. Complications in post-surgical period developed with 3 patients (in 2 cases – marginal necrosis of the flap, in 1 – infection of the cavity and as a result - necessity to remove the expander). The developed complications were resolved with the help of other reconstructive methods.

Conclusions. In the reconstruction surgery of burns and their consequences, direct tissue expansion has a particular place with certain indications:

1. The need of donor tissue of certain quality (color, elasticity, hairy tissue).
2. Intact plastic material (skin, fatty tissue, fascia).
3. Aesthetic efficiency of the plastic material.

TREATMET OF INFANTILE HEMANGIOMAS

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During last year in the Regional pediatric clinical hospital of Kharkov 53 children with volume, noninvoluting and complicated hemangiomas were treated. There were 39 children under 1 year old, 10 children from 1 to 3 years old and 4 children over 3 years old. Before treatment, patients were scheduled lab tests, USG of internal organs and brain, CT, MRI, and histological analysis of biopsy materials. Indications to different methods of treatment were determined by type, localization, size, intensity of growth and stage of tumor's development. Surgery was performed on 19 children. Conservative treatment was assigned for 34 children. Systemic therapy with propranolol was conducted for 19 children. In 15 cases we used permanent compressive therapy with additional applications of timolol 0,5 % three times a day. Children under 1 year old with fast growing hemangiomas were administered with propranolol in therapeutic dose of 2 mg/kg a day. Complete cure was observed in 12 cases. In 7 cases stabilization of growth was achieved but there remained significant residual changes such as excessive tissues which required surgical interventions. Surgery was performed on 19 patients; for 3 of them cytoreductive surgery. During the interventions we used high-frequency electric coagulator in "overlap" regime. After cytoreductive surgery volume of tumor decreased and partial devascularization led to discontinuance of growth. Plastic material for further reconstructive surgery was preserved. Basic criteria for prescribing therapy which combined compression and local timolol 0,5% were moderate growth intensity, with localization on the extremities, head, chest where it is possible to perform effective compression. Within one month significant regression was observed. It was manifested as decrease of volume and area of tumor, paleness and absence of volume restoration after removal of compression.

Usage of high-frequency electric coagulator, significantly improves conditions and results of surgical treatment.

Combining local treatment of β -adrenoblockers and permanent compression is very effective in treatment of hemangiomas in children.