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SURGICAL TREATMENT FOR LIMB CONTRACTURES IN CHILDREN FOLLOWING BURNS

Abdurakhmanov F. S, Mirzakarimov B. X, Ketmonov A. G.
Andijan State Medical Institute, Department of Pediatric Surgery

Annotation: Surgeons and traumatologists in various regions of the Republic of Uzbekistan, as well as nearby and distant countries, will utilize the findings from this study to treat a wide range of patients suffering from post-burn contractures.

The complete recovery of children depends on restoring their functional abilities and removing any physical imperfections. This rehabilitation process aims to enable these patients to fully participate in society as individuals and holds significant social and economic value.

Key words: post-burn contracture, surgical treatment, plastic surgery, limb, childrens.

Relevance. The issue of rehabilitating individuals who have suffered from burns remains important and remains one of the most challenging obstacles in the field of reconstructive and plastic surgery.

Statistics reveal that burns make up approximately 22.8% of disabilities worldwide. Within this group, 82% of individuals fall within the age range of 20 to 49 years, which is considered the most productive period of their lives. In the overall count of individuals who have been injured by burns, scar deformities and contractures occur in 23% of individuals who have experienced burns, and in cases of severe burns covering more than 10% of the body, this percentage ranges from 40-55% among patients

The consequences of severe contractures and deformations in the form of impaired function of the limbs, as well as cosmetic defects contribute to the disruption of the psycho-emotional state, generate feelings of uncertainty, inferiority, hopelessness, reduce the spiritual and labor capabilities of the individual, contributing to the development of diseases of psychosomatic origin - neuroses, angina pectoris, hypertension.

At present, just like in previous years, there remains a consistent increase in the number of individuals experiencing the repercussions of burns.

Severe contractures and limb deformities are the common outcomes of deep burns, often resulting in impaired limb function and occasionally leaving the patient completely disabled. Reconstructive surgery for burns aims to restore the impaired mobility of affected joints, and it is considered a primary focus. Multiple authors indicate that approximately 40 to 75% of individuals who have experienced severe burns need reconstructive procedures in order to regain lost functionality.

Numerous scientific studies conducted by both domestic and international researchers have aimed to enhance correction techniques and refine the surgical and non-surgical treatment approaches for post-burn scar contractures in major joints. There is an ongoing search for fresh approaches to address this issue, as surgeons persistently endeavor to enhance existing techniques for fixing deformities caused by post-burn

scars are trying to develop more advanced methods of reconstructive operations.

Despite the active development and search for new solutions to this problem, when studying domestic and foreign literature, we did not find clear algorithms and methods that determine the optimal type of treatment for contractures depending on the location and extent of scars, the condition and resources of healthy tissues, based on large clinical material; there is no consensus on the timing of surgical treatment of joint contractures depending on the time that has passed since the burn injury. All this is necessary for specialists to achieve optimal results in the rehabilitation of patients with consequences of burns.

The aim of this study is to enhance the outcomes of surgical interventions for children with limb post-burn contractures

Materials and research methods. The material of this study includes an analysis of the results of examination and surgical treatment of 98 children under the age of 15 years who were operated on in the surgery department of the ARMMC. Children under 5 years of age predominated (49%). Male patients accounted for 52%, female - 46%. The youngest patient was 1 year 2 months, the oldest was 15 years old.

Patients were admitted from 6 months to 14 years after receiving a burn injury. The causes of burns were quite varied: boiling water, electric stove, flame, hot food, hot stove, hot oil, and in one case, quicklime.

Results. The severity of post-burn scar flexion contracture of the fingers is determined by the deficiency of integumentary tissues along the palmar surface of the fingers with the presence of contracture. The ratio of the distance between two points on the palmar surface of the finger of the same name on a healthy hand to the changed distance between similar points on the palmar surface of the affected finger objectively shows the degree of integumentary tissue deficiency. This indicator, which we called the contracture severity index (/s), allows us to determine the need for tissue lengthening to completely eliminate contracture.

Two large groups of local plastic methods for eliminating cicatricial flexion contracture of the fingers have been identified - simple (Z-plasty, multiple Z-plasty) and complex (modified Z-plasty methods - methods of Limberg, Hirshowitz, Smith (butterfly), Mustad'e, Karacaoglan etc.) methods.

Simple Z-plasty methods are effective in eliminating mild flexion contracture of the finger, when the need for tissue lengthening does not exceed 124%.

To eliminate moderate cicatricial flexion contracture of the finger, complex (modified) Z-plasty methods can eliminate up to 200% of tissue deficiency along the length of the finger.

In case of severe scar contractures of the fingers, the need for tissue lengthening exceeds 200%; previously existing methods of local plastic surgery do not allow effective elimination of the contracture.

The development of a new method of local plastic surgery - the method of counter-moving rectangular flaps, made it possible to achieve tissue elongation along the palmar surface of the finger up to 10-30% and to avoid complex, multi-stage surgical interventions. This method is effective for cicatricial flexion contractures of the fingers of moderate and severe severity.

The results of surgical treatment of post-burn scar flexion contractures of the fingers depend on the severity, duration of existence and the correct choice of surgical method for eliminating the contracture.

A differentiated approach to the selection of local plastic surgeries depending on the severity of the contracture made it possible to obtain good and excellent functional results in 86.2% of cases.

The functional results of using the method of counter-moving rectangular flaps were good and excellent in 94.3% of cases.

Вывод. The use of optical magnification and precision technology made it possible to identify digital

neurovascular bundles in all cases and perform the operation more safely. The development of an indicator of the degree of contracture elimination made it possible to objectively evaluate the results of surgical treatment of scar flexion contractures of the fingers.

Indications for performing various types of local plastic surgery have been determined depending on the severity of contracture and the possibilities of ways to eliminate tissue deficiency. The development and implementation of a new method of counter-moving rectangular flaps for severe scar flexion contractures of the fingers, made it possible to avoid complex and multi-stage surgical interventions, which significantly reduces the treatment time for patients and is of great socio-economic importance.

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