OPTIMIZATION OF SURGICAL TREATMENT OF EARLY DEEP BURN

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Abstarct: An analysis was made of the management of patients with dermal burns in a specialized department, taking into account the choice of the method of wound management: conservative and early surgical restoration of the skin.

Keywords: children, burn injury, wounds, skin.

ОПТИМИЗАЦИЯ ОПЕРАТИВНОЙ ЛЕЧЕНИИ РАННИХ ГЛУБОКИХ ОЖОГОВ

Аннотация: Проведен анализ ведения больных с дермальными ожогами в условиях специализированного отделения с учетом выбора метода ведения раны: консервативным и ранним оперативным восстановлением кожного покрова.

Ключевые слова: дети, ожоговая травма, раны, кожный покров.

INTRODUCTION

The prognosis of the outcome of the injury, the duration of treatment depends on the speed and completeness of the restoration of the damaged skin with deep skin burns. Restoration of the skin is possible only with the complete cleansing of the burned skin from its dead layers. cleaning can be performed surgically and conservatively.

Conservative cleansing occurs through the phase of inflammation of the wound process with suppuration of the wound, independent rejection of the scab and the formation of granulating wounds. When choosing this method of wound cleansing, the volume of one-stage blood loss is reduced, but the period of epithelization is significantly increased. Conservative wound management increases the risk of purulent-septic and other complications, as well as the volume of nutritional support, expensive antibacterial and antifungal therapy.

With early surgical treatment, the period of treatment of the patient is reduced, the risk of various complications is reduced, since the stages of toxemia and septicotoxemia are excluded from the course of the burn disease. the percentage of engraftment of flaps also increases, the cosmetic and functional results of autodermoplasty improve.

Given the advantages of early surgical restoration of the skin, it could be assumed that this method would become the main one in the treatment of deep burns. but the conservative method of cleansing wounds is still used to a large extent. Questions remain regarding the timing of necrectomy, its volume, methods for diagnosing the depth of the lesion, methods for closing the postoperative wound, and postoperative management of the victim. There are no clear data in the literature on the decrease in mortality in patients with critical burns above 50%, who underwent early surgical treatment.

MATERIALS AND METHODS

The material for the study was the results of treatment of children admitted to the burn department of the SFRNCEMMP from 2006 to 2023. studied groups of children with deep burns II-III ab. degree with a lesion area over 40%, from which children with supercritical burns with a lesion area over 60% were additionally identified.

Table 1

Number of patients during the reporting period and overall mortality

Years	Total urgent	Died	Mortality, %
2006-2023 years	6592	82	1,24
2006-2013 years	2053	61	2,97
2014-2023 years	4539	21	0,46

The subdivision into two periods was made taking into account the change in the tactics of treating patients in the early 2013s, with the departure from aggressive early surgical tactics and the beginning of the introduction of the “secondary deepening of burns” prevention technique.

A total of 137 children were hospitalized with dermal burns over 40% of the body, mortality in the group was 37.2%. In this group, 62 children (45.25%) underwent early surgical treatment, and 75 children were treated conservatively (54.75%). In the subgroup of children operated on at an early stage (n-62), 25 (40.3%) children died, and 37 (59.7%) children recovered. In the subgroup of children treated conservatively (n-75), 26-34.6% died, 49-65.4% were discharged recovered. Among the 51 deceased children, 25 children were operated on in the early stages - 49%, 26 children were not operated on - 51%.

RESULTS AND DISCUSSION

The distribution of the number of patients and treatment outcomes by years is shown in Figures 1-3. In the group of burned children with a lesion area of more than 40% of the body, a high mortality rate is predicted. a slightly larger number of children in the subgroup treated conservatively is explained by the presence of children who had spontaneous epithelialization of IIIa degree burns, as well as children in whom early surgical treatment was contraindicated due to the severity of the condition. In the group of children who died, those operated on early and those treated conservatively were divided equally — 49% and 51%, respectively. In the group of children operated on at an early stage, mortality is significantly higher than in the group of children treated conservatively, by almost 6%. The breakdown by years shows a decrease in casualties with extensive burns in 2013. there is no clear relationship between overall mortality and the chosen method of wound management. Until 2013, aggressive early surgical tactics were used in the department, more children were operated on, therefore, there is a correlatively higher mortality in the groups of early surgical treatment. After 2013, with the transition to a more gentle method of wound management, fewer children were operated on, the proportion of children treated conservatively increased, and the number of deaths in this subgroup increased relatively. Evaluating the data of treatment in the group of children with dermal burns over 40% of the body, it is impossible to reliably state the effect of one method or another on the outcome of burn disease.

From the group of children with burns over 40% of the body, we singled out a subgroup with scintillating burns II-III ab. degree of burns with an area of more than 60%. such children were admitted to department 28, in the subgroup 11 children — 39.28% were subjected to early surgical treatment, 17 children were treated conservatively — 60.72%. Mortality in the subgroup was 64.29%. A total of 18 children died, among them 9-50% were operated on, 9 children were treated conservatively - 50%. Among 11 children subjected to early surgical treatment, 9-81.8% died, 2-18.2% survived. Among 17 children treated conservatively, 9-53% died, 8 children recovered - 47%. Evaluating the treatment data of children in the subgroup with supercritical

burns, significantly better results were obtained among children who underwent conservative wound management and delayed surgery.

CONCLUSIONS

1. When choosing a treatment method for children with dermal burns over 40%, it cannot be argued that the conservative method of wound management is superior to early surgical restoration of the skin.

2. When choosing a method of wound management in patients with supercritical dermal burns with an area of more than 60% of the body, conservative management is currently preferred.

3. The choice of wound management method should take into account all the necessary conditions - the patient's condition, the availability of donor resources, the availability of wound dressings to cover the surgical wound and donor sites, the availability of the necessary equipment for diagnosing the depth of the lesion.

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