IMPROVING THE TREATMENT METHODS FOR DEEP BURNS OF THE FACE AND NECK IN CHILDREN

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Objective of the Study. To investigate the advantages of using a temporary wound dressing (TWD) in the surgical treatment of deep burn injuries of the face and neck.

Materials and Methods. The treatment outcomes of 210 children with deep burn injuries of the face and neck who were treated at the Combustiological Department of the Samarkand Branch of the Republican Scientific Center for Emergency Medical Care during 2020–2026 were analyzed. The patients were divided into two groups.

In 108 patients (51.4%) in the main group, early necrectomy and a temporary wound dressing (TWD), “Parapran,” were applied to deep burn wounds of the face and neck. The patients ranged in age from 4 months to 14 years, with a mean age of 6.2 ± 3.0 years.

Of the 165 injured patients (78.5%), burn injuries were sustained as a result of fires occurring inside enclosed buildings. Twenty-three patients (10.9%) sustained burns caused by open flames and the combustion of petroleum products, gas condensate, and gasoline. Deep burn injuries caused by exposure to hot steam and oil were observed in 11 patients (5.2%).

In the injured patients, the area of deep burns ranged from 1% to 9%.

Our study examined Grade IIIA–IV burn injuries of the face and neck. The patients were divided into two comparable groups based on such parameters as the extent of the burn area, age, and time of hospital admission.

Results. In the main group, 108 children did not undergo primary surgical treatment immediately after sustaining the burn injury. This was mainly due to the patients being in a severe state of burn shock, as well as the suspicion of inhalation injury. Therefore, anti-shock measures were initially performed, and the patients’ general condition was stabilized.

Twelve to sixteen hours after anti-shock therapy, the Doxidin-Lidocaine aerosol preparation containing analgesic agents was applied for primary surgical treatment of the wounds in the face and neck areas. Necrotic tissues were removed, and the affected areas were treated with “Parapran” temporary wound dressing containing chlorhexidine, as well as “Dermogard” ointment containing silver sulfadiazine and chlorhexidine. An aseptic dressing soaked with a 1% Betadine solution was then applied over the wound. The “Parapran” temporary wound dressing (TWD) was

applied, followed by an aseptic dressing treated with Betadine, and the dressing was secured over the face and neck areas.

During the follow-up period, it was found that the use of “Parapran” (TWD) and “Dermogard” ointment prevented excessive drying of the burned areas and facilitated the separation and removal of necrotic tissue from the wound. As a result, patients experienced a significant reduction in pain during dressing changes.

By days 12–14, the wounds in the face and neck areas were completely cleansed, and granulation tissue had formed. Initially, free skin grafting was performed in the areas of the orbit and eyelids.

For deep contact burns of the face and neck, with a burn area of up to 1%, “Parapran” (TWD) was applied on the first day. On the second day, early necrectomy was performed using an electric dermatome, removing a layer of tissue 0.2–0.3 mm thick. Necrotic tissue was excised from the wound surface until capillary bleeding was observed. At the same time, incisions were made along the wound margins, primary sutures were placed, and autodermoplasty (autologous skin grafting) was performed.

In patients of the main group, the use of the wound dressing “Parapran” resulted in complete formation of granulation tissue in deep burn wounds of the face and neck by days 12–14.

The wounds were cleansed within a shorter period, and skin grafting was performed on post-injury days 14–17.

As a result of the treatment, the duration of hospitalization was reduced from 28.5 ± 2.4 days to 21.5 ± 1.5 days. The incidence of complications following surgical treatment decreased from 62.7% to 24.1%.

Conclusion.

The use of the temporary wound dressing “Parapran” in the treatment of deep burns of the face and neck is a highly effective method. This treatment approach enables early skin grafting, accelerates the processes of wound cleansing and granulation, and reduces the incidence of complications associated with skin grafting.