SKIN ALLOGRAFTING IN TREATMENT EXTENSIVE BURNS (P038)

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**Background:** In burned patients with scarcity of skin donor recourses surgical treatment of extensive full-thickness burns remains a great challenge. Using cultured keratinocytes requires the long cultivate time, the high cost of cellular engineering procedures limits its application in development country and in case of fire disasters with great amount of severe burned patients. In this situation skin allografting may have been the possible solution. Skin allografts reduce wound losses, stimulate growth of granulation and epithelization of partial-thickness burns. Skin allografting not only provides favorable condition for following skin autografting and improves of the general condition critical burned patients. Rejection reaction of skin allografts usually develops in 2-3 weeks after procedure and makes patient’s condition worse. The aim of our study is to elevate advantages and disadvantages of skin allografting.

**Method:** We analyzed retrospective data of burned patients with unfavorable prognosis in according to Frank’s index and Baux’s Rule. All enrolled in the study patients underwent surgical treatment of deep burn. The control group consists of patients, which were made only skin autografting. The patients with skin allografting and following autografting were included in the main group.

**Result:** The data of 47 severe burned patients were analyzed. The median age was 56 years old. Men women ratio was 1.5:1. The median of burn area was 34.2% body surface; the median of full-thickness burn area was 20.3%. The inhalation injure was diagnosed in 85.7% patients. The surgical treatment of deep burns was performed after stabilization of patient. The control group consist of 23 patients underwent debridement with skin autografting (one-step operation). Debridement with skin allografting and following autografting (two-step operation) were made in 24 severe burned patients. Skin allografts were washed in ozone water solution to prevent early rejection. In follow-up allograftes was substituted skin autografts. Allografts and autograft was meshed in a 4:1 ratio. The patients of the main group sustained more severe burn than in the control group. The area of operation was no more than 10% body surface. The burn area, the area of full-thickness, penetration and severity of inhalation injury were more in patients with allografting with following autografting than in patients with only autografting (p<0.001, Mann-Whitney U-test). Despite patients after alloskin grafting had protein and albumin plasma values were higher and amount of platelets was more than in the control group (p<0.005, Mann-Whitney U-test). The Me (Me25–Me75) of plasma level of albumin in patients with alloskin grafts was 31.4 (27.2 - 33.9) g/l. In patients with only autografits Me (Me25–Me75) of albumin levels was 28.6 (25.4 - 31.7) g/l. The Me (Me25–Me75) of platelet amount in the main group was 137.4 (112.5 - 162.1) x10^3/µl, and in control group - 116.2 (82.1-136.3) x10^3/µl. The median life span after burn in dead patients in main group was 23.2 days, in the control group - 17.9 days. The mortality in patient of two-step operation was 37.5%, in the patients with only autografting - 56.5%.

**Conclusion:** Skin allografting in treatment of extensive burns allows stabilizing critical patients and reduces mortality.
Figure 1