THE USE OF ACUACEL AG BURN WOUND COVERING IN COMPLEX TREATMENT OF CHILDREN WITH THERMAL INJURIES (P180)

*Brazol M.1,2, Baindurashvili A.1,2, Mitrofanova E.1,2, Tsvetaev E.1,2

1 The Tuner Institute for Children's Orthopedics, Saint-Petersburg, Russian Federation
2 Children's City Hospital №1, Saint-Petersburg, Russian Federation

Objective: To evaluate the effectiveness of the treatment of II-IIIA degree burns (ICD-10) in children with the use of silver-containing wound covering Acuacel Ag Burn Hydrofiber dressing.

Material and methods: The preparation was used in the treatment of 20 patients aged from 6 months to 18 years old with burn area of 2% to 15% II-IIIA degree as monotherapy in the treatment of 45 patients with burn area of 5 to 80% in combination with other drugs ointment and wound coverings hospitalized during 2014 in the burn unit of CSH №1. The control group consisted of 115 children with burns treated with conventional drugs ointment for topical treatment of wounds and gauze dressings.

Clinical evaluation: of the effectiveness of treatment was carried out on the basis of visual observation of the state of the wound bed and the course of wound healing, ease of use and the level of trauma when removing dressings, bandages frequency. Subjective assessment of pain presence in a patient during dressing was taken into account.

Laboratory studies: included clinical blood tests, microbiological data, cytological screening of wound impression smears.

Application of covering was carried out in 1-3 days from the date of injury, after primary surgical treatment of wounds. The edges of the dressing came on healthy skin by an average of 2 cm. After contact Acuacel Ag Burn with a wound surface, a gel is formed, providing a tight fit of the covering to the wound bed and minimizing the "dead" space. Dressing control was made 1 time in 3-5 days. With the high level of exudation we performed partial replacement of covering. In the treatment of II degree burns, complete epithelialization of the wound surface was observed in 6-8 day from the date of injury. In the treatment of IIIA degree burns in limited areas, epithelialization timing was in average 12-14 days, complete epithelialization of larger IIIA degree burn surfaces occurs within 17-19 days. It should be noted that complete removal of covering was carried out in the case of complete epithelialization of the wound surface and was in contrast to traditional gauze swabs, in all cases, there was no trauma of wound bed and damage of the newly formed tissue. Patients highly appreciated this type of wound covering as a constant wear, and during dressing. Physical activity of children was not compromised. Pain was absent or minimal. Additional analgesia during manipulations was not carried out. Temperature and allergic reactions were not identified.

Microbiological control in the studied groups was conducted in 20 patients with signs of wound infection. In 60% of cases there was a reliably proven reduce of bacterial contamination of wounds by 1.5-2 times compared to conventional silver-containing ointment preparations on the stages of healing, which is confirmed by the results of the inoculation. Significant changes in the species composition of microflora were not revealed. Secondary infection during treatment was absent (microbial landscape has not been changed).
**Results:** As a result of clinical trials of Acuacel Ag Burn wound covering, it was clearly demonstrated that this type of dressing is highly effective when used in patients with superficial II degree burns and mosaic II-IIIA degree burns, including the large area of damage. The undoubted advantage of Acuacel Ag Burn is painless dressing, comfort during wear and reducing the frequency of dressings, which improves the quality of life of patients during treatment.

**Conclusions:** Therefore, this product is effective in the conservative treatment of superficial burns at all stages of wound healing process, both as monotherapy for local burns, and in the complex treatment of children with extensive thermal injuries.