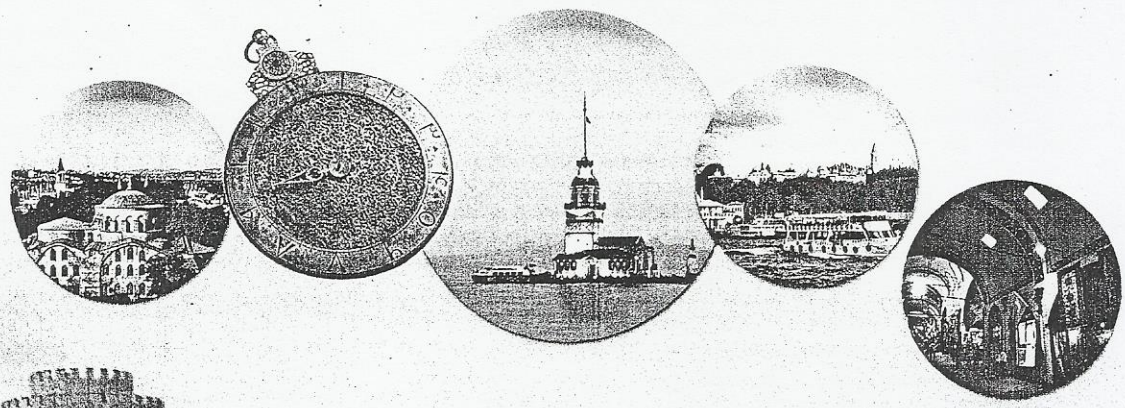
ISBI

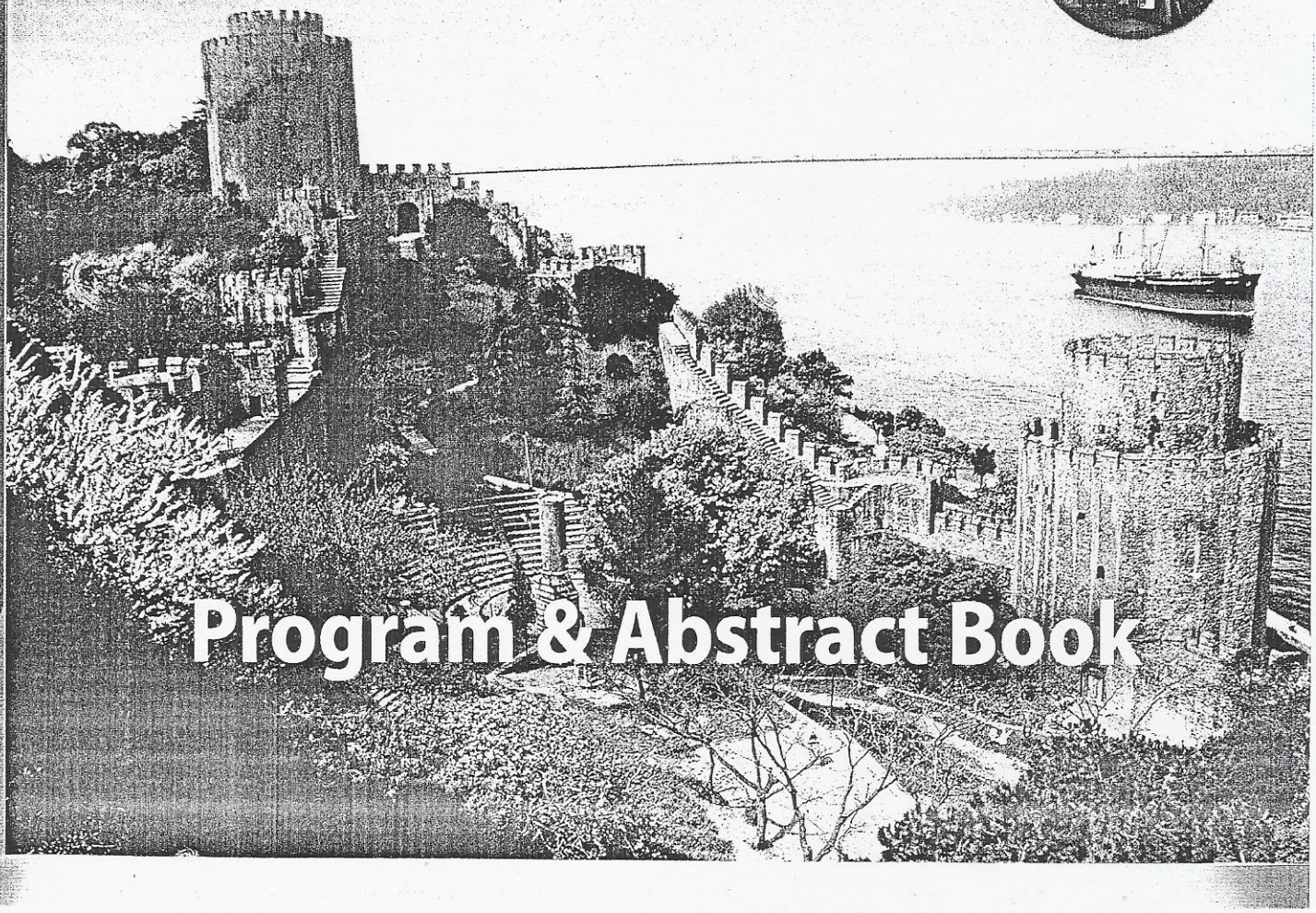
BASKENT UNIVERSITY

15th Meeting of the International Society for Burn Injuries (ISBI)

50 Golden Anniversary

June 21-25, 2010
Istanbul/ Turkey





Program & Abstract Book

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AN EXPERIENCE WITH THE NEGATIVE PRESSURE DRESSING IN THE TREATMENT OF SKULL NECROSIS DUE TO ELECTRICAL BURN

Nazım Gümüş

Adana Numune Research and Training Hospital, Aesthetic Plastic and Reconstructive Surgery Department, Adana, Turkey

Background: Deep burns of the scalp and skull due to high-voltage electrical current present serious therapeutic challenges in early and late stages of the healing. In this study, in the treatment of burned skull, negative pressure dressing is used to facilitate separation of the necrotic bones from viable cranium and to develop granulation tissue formation after trephanation of the bone.

Methods: A 36 year-old male patient who had seriously injured his head with high-voltage electrical current was presented. On the fifth day after injury, necrosis of the scalp, became clearly significant with the permanent loss of blood perfusion, so extensive debridement was necessary. Under general anesthesia, the whole necrosis of the scalp was removed, leaving the calvarial bone exposed. While devitalized calvaria was preserved in place, exposed bone was drilled. Then a vacuum-assisted dressing was applied to the wound, and set to 125 mm Hg continuous pressure. Cranial wound covered with vacuum-assisted dressing was followed carefully with daily examination for any signs of infection or other local complications.

Results: Some granulation tissue developed in the holes and margins of the wound within 32 days, but it was not sufficient to allow successful closure of the wound with skin grafting. Therefore, for the debridement of the necrotic layers of the skull, the patient underwent another operation in which devitalized outer table of the skull was easily separated from viable bone by using a little force to remove. When elevated the necrotic outer table, profuse granulation tissue appeared clearly over the inner table of the skull, seeming suitable for skin grafting.

Conclusions: When dealing with this experience, vacuum-assisted dressing seems to be a useful tool to accelerate separation of the necrotic bones, and to develop granulation tissue formation in burned calvarium.

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THE STUDY ON THE EXPRESSION OF NEUROLOBIN IN RATS DURING THE PROCESS OF BRAIN EDEMA INDUCED BY ENDOTOXIN

Chao Liu

Department of Anesthesiology, the First Affiliated Hospital of Chongqing Medical University, Chongqing, China

One hundred adult Sprague-Dawley rats were randomly divided into the control group (n=10, 0.1 mL normal saline was injected via ventriculus quartus of animals) and the experimental group (n=90). In the experimental group, ninety adult Sprague-Dawley rats were randomly divided into 9 groups (n=10, in each group; Endotoxin was injected via ventriculus quartus of animals) by factorial design. The dose factor (lower-dose, middle-dose and higher-dose) and the time factor (12h, 24h, 48h) were analysed in this experiment. The expression of Ngb over different periods was measured by ELISA and Western-Blot. 1) ELISA showed that Ngb expression in the cortex of frontal lobe and hippocampus of rats was increased with the dose and the duration of time after endotoxin injection. 2) Western Blot showed that Ngb with relative molecular mass 17 kD was observed in all groups. The tendency of Ngb expression change in the cortex of frontal lobe and hippocampus was the same as ELISA. Our results indicate that the changes of Ngb expression were correlated with the endotoxin dose and the duration of time.

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TIGECYCLIN IN THE TREATMENT OF SEVERELY BURNED PATIENTS – TWO YEARS OF EXPERIENCE WITH NEW GLYCYLCYCLIN

Bretislav Lipovy[1], Hana Rihova[1], Zuzana Jelinkova[1], Marketa Hanslianova[2], Yvona Kaloudova[1], Pavel Brychta[1]

[1]Dep.of Burns and Reconstructive Surgery, [2]Dep.of Clinical Microbiology, University Hospital Brno, Czech Republic

Background: Infectious complications play a dominant role in morbidity and mortality of severely burned patients. With a development of antibiotic resistance in the new millennium multi-resistant bacterial strains, Gram-positive as well as Gram-negative, become a great therapeutic problem in the patients with thermal trauma. Tigecyclin is a new semi-synthetic antibiotic that ranks among glycylcyclins. In the Czech Republic this preperate is registered for complicated infections of skin, soft tissues and complicated intra-abdominal infections.

Material and methods: Our trial is designed as a retrospective and observational clinical study. We included XX patients treated with Tigecyclin of those hospitalized on the Department of burns and reconstructive surgery in the years 2008-2009.

Results: In the period 2008-2009 we used this antibiotic on 23 patients. The most frequent indication for Tigecyclin therapy was complicated infection of the skin and sub-cutis. The average age of the patients was 38.5 years, the average extent of burned area was 29% of TBSA (total body surface area) and the hospitalization length was on average 41.4 days. No side effects were observed.

Conclusion: In the last years severely burned patients are endangered by the multi-resistant bacterial strains. Therapy of these infections is often very difficult. What we appreciate on this new antibiotic was high effectiveness, wide antibacterial spectrum, low toxicity and infrequent occurrence of adverse effects. That's why we think of Tigecyclin as an interesting alternative in the infection treatment of severely burned patients.