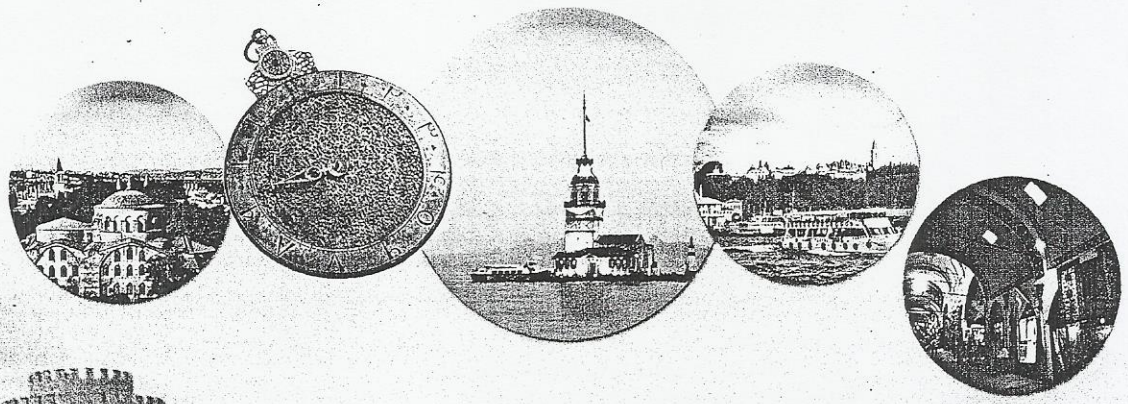
ISBI

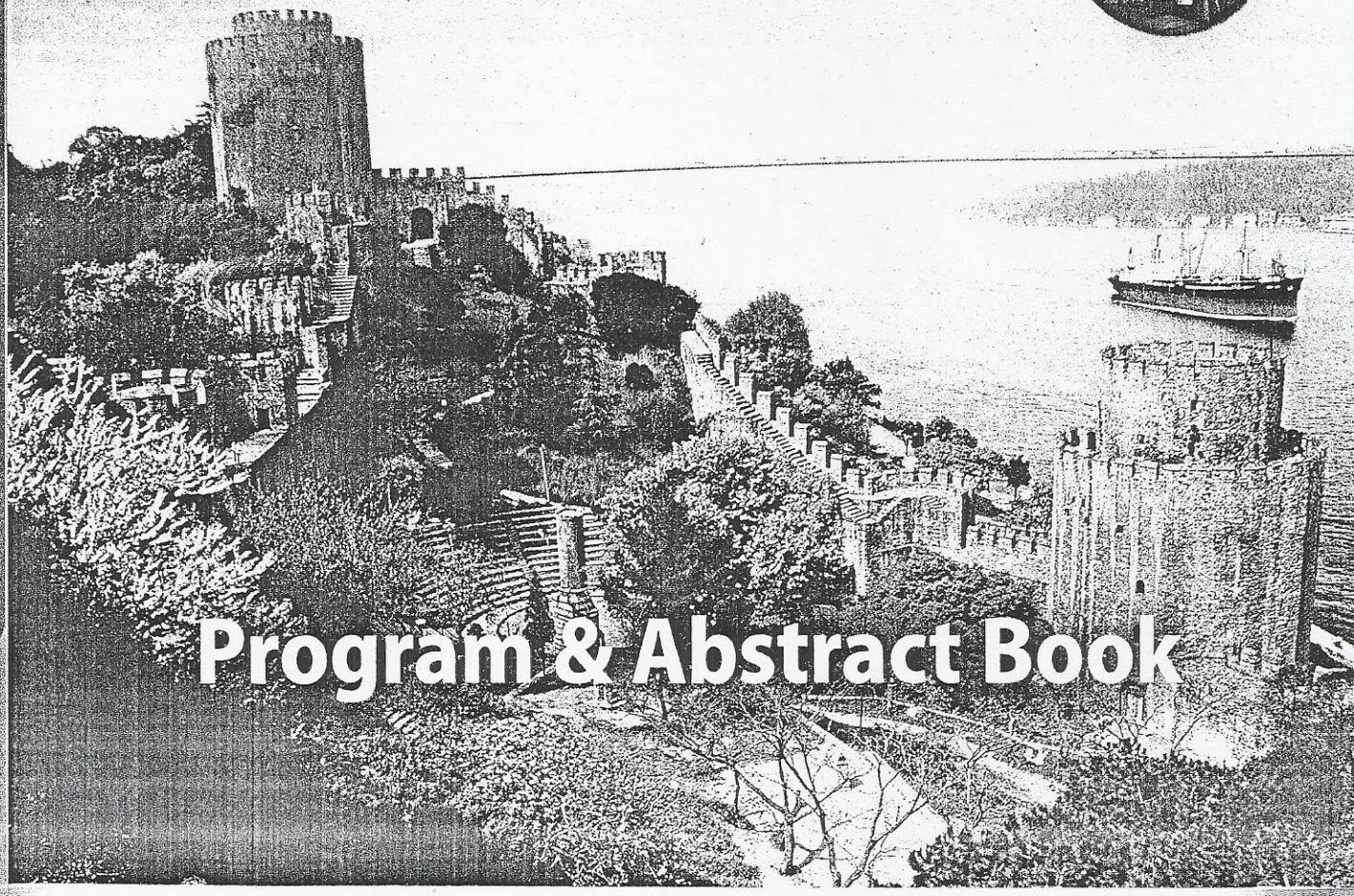
BASKENT UNIVERSITY

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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WOUND INFECTION OF SPINAL CORD STIMULATOR: A CASE REPORT

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Purpose: Nowadays spinal cord stimulator is frequently used for the patients diagnosed as complex regional pain syndrome. The lead is placed above the spinal cord and connected to the stimulation generator, which is mostly placed in the subcutaneous layer of the abdomen. When the complication occurs in the generator inserted site, such as infection or generator exposure, replacement of the new generator to another site or pocket of the abdomen would be the classical choice. The objective of our study is to present our experience of the effective replacement of the existing stimulation generator from subcutaneous layer to another layer in same site after the wound infection for inexpensive cost and avoidance of new scar formation.

Methods: A 50-year-old man who was diagnosed as complex regional pain syndrome after traffic accident received spinal cord stimulator, Synergy® (Medtronic, Minneapolis, USA) insertion 1 month ago by anesthetist. The patient was referred to our department for wound infection management. Patient was presented with erythema, swelling, thick discharge and wound disruption in the left upper quadrant of the abdomen. After surgical debridement of the capsule, the existing generator replacement beneath the anterior layer of rectus sheath was performed after sterilization by alcohol.

Results: Patient's postoperative course was uneventful without any complication and had no evidence of infection for 12 months follow-up period.

Conclusion: Replacement of existing spinal cord stimulation generator after sterilization between the anterior layer of rectus sheath and rectus abdominus muscle in the abdomen will be another choice of treatment in wound infection of stimulator generator.

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EFFECT OF THE SUBATMOSPHERIC PRESSURE ON UPPER EXTREMITY SALVAGE AFTER HIGH-VOLTAGE ELECTRICAL BURN

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Background: Negative pressure dressing stimulates wound healing by promoting cellular proliferation and regeneration. It removes interstitial edema and increases in local blood flow resulting in developing the granulation tissue rapidly. In this study, it was used in the salvage of the upper extremity injured by high-voltage electrical current which led to ongoing tissue necrosis, elevated compartment pressures and deep tissue edema to investigate if subatmospheric pressure could limit the zone of injury or ongoing tissue necrosis after severe limb injury.

Methods: Presented here are three patients who contacted with high-voltage electrical wire carrying more than 10000 volts, and seriously injured their upper extremities, resulting in contracted upper limbs. After the initial treatment which involved fluid resuscitation, fasciotomy, carpal tunnel release and debridement, both upper limbs were dressed with application of silver sulphadiazine cream. On the fifth day after injury, negative pressure dressing was applied to the wounds of right upper extremity with 125 mm Hg continuous pressure, and was maintained for 20 days. As a control, left upper extremity was closed with daily conventional dressing including silver sulphadiazine cream.

Results: All of the limbs treated with negative pressure dressing were saved, but significant tissue loss developed, needing complex reconstruction procedures. However, in the left extremities, one limb was amputated because of the permanent loss of blood perfusion, the other limb healed at about 20 days later the right limb and another limb healed with more extensive damage than the right.

Conclusions: When dealing with these experiences, it seems that negative pressure has an important effect on reducing the severity of the electrical damage to the extremity, leaving more tissue in the limb possibly due to the protection of tissues from necrosis which can help considerably in the extremity salvage.

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CURRENT STRATEGY USING ARTIFICIAL DERMIS WITH THIN AUTOGRAFTS FOR SEVERE BURNS IN OUR BURN CENTER IMPROVED THE MORTALITY

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Background: We had started our current strategy for severe burns in 2003 after we presented the patients data with the high mortality for severe burns of burn index 25 or more in our burn center at the 29th annual meeting of the Japanese Association for Acute Medicine in 2001. Our current strategy is as follows:

1. Early near-total escharectomy, which means to do less than ten percent of residual eschar at postburn 7 day, is always planned.
2. Artificial dermis is aggressively applied in a standard way or the sandwich method with thin autografts.
3. Cryopreserved cadaver skin graft from Skin Bank is used with artificial dermis and thin autografts in case of 50%TBSA and more if possible.

Methods: Clinical records of severely burned patients over burn index (BI) 24 who were admitted to our burn center from 2003 to 2007 were compared to the records from 1996 to 2000.

Result: Number of patients was 15 (2003-2007) vs. 17 (1996-2000). Age was 54.7 (range 10-86) vs. 55.5 (range 21-82). Number of patients associated with inhalation injury was 8 vs. 10. %TBSA