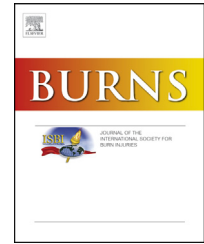




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The use of acupuncture in first aid of burns—Clinical report

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ABSTRACT

Burns are a very painful skin injury, or injury of soft tissues. The development of post-traumatic stress disorder can develop, even in those with minor injuries (Ia-IIb degree). Development of problems is very rapid and intense since, according to developmental embryology, the skin and central nervous system (CNS) descend from the same germ layer—ectoderm.

This clinical report presents the results acquired from the data of 1008 patients suffering from burns treated by the acupuncture (ACU)—from 1983–2015 in the surgery ward of the hospital in Vysoké Myto in the Czech Republic.

The data of 1008 patients were processed and evaluated.

1. The report demonstrates a positive effect of ACU treatment signs on the skin were monitored, i.e. reddening, pigmentation, scars. During the treatment the elimination of many of these signs was observed.

Improvement of healing process and improvement in the final wound healing were evaluated and shown by the statistical method—the χ^2 test. For demonstrating the effect of ACU treatment of BT the Pearson's and the Cramer's contingency coefficient were examined. 2. The time of the first application of the ACU treatment after burn was followed and evaluated with a random set. The best results were achieved when the first ACU treatment was applied as soon as possible after BT injury (ideally immediately, optimally within 48 h). The positive effect of ACU on burns is medical, economical and biopsychosocial.

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1. Introduction

Severe burn is defined as a condition which occurs by direct or indirect action of supra-threshold value of thermal energy, electricity, radiation or certain chemicals on the skin, soft tissues or airways due to smoke inhalation [1].

Scalding and burn burns from flame and chemicals, etc. lead to damage or destruction of skin at different depths. The following factors are the most important: area, extent and degree. Other factors also play a role: type of burns, patient's age, patient's mental state and condition of their immune system, and comprehensive medical history of the patient.

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Burns are proportionally less represented than contusions and severe bruising of the skin and soft tissues. But even with a small range of scalding or burns the situation may dramatically deteriorate with rapid development of a burn shock. If it is not treated in time, the patient may even die. This type of trauma is therefore ranked among the most serious injuries. In Europe, burns are ranked 13th in the list of tragic events. The sad fact is that 40% of all burn victims are children [2]. Globally, burns are a serious public health problem. In the last 20 years, the overall number of burn cases has risen due to a higher number of transport accidents, international war conflicts and also terrorist attacks. According to the World Health Organisation, there are over 265,000 deaths each year from fires only, with more deaths from scalds, electrical burns, and other forms of burns for which global data are not available.

Burns are also characterized by increased pain intensity and rapid development of post-traumatic stress. Development of circulatory dynamic insufficiency in particular venous and lymphatic systems and development of secondary inflammatory response rapidly arise in many cases. Development of hypertrophic scars is another complication in the context of healing.

The important factors that affect prognosis of a burn patient are proper first aid, provision of emergency care and quick transport to a specialised institution [3,4]. The extent and depth of the affected areas are directly proportional to the

length of exposure to heat (boiling liquids, burning or hot objects) [4].

In standard burn care analgesics, sedatives, antibiotics, frequent dressing changes, or also autotransplantation at deep levels of injury (IIb-III) are encountered.

Most burn patients are fully conscious and well oriented and try to cooperate. But it is always necessary to insure appropriate first aid [5,6].

1.1. What is the reason for the use of ACU?

The author's theory for explanation of the mechanism of action of acupuncture in the acute phase of burn treatment is mostly likely induction, a kind of repetition of previous biological events on the virtual level. This model is represented by a reflection of biological reality in an anti-idiotypic network inducing faster healing through interactions with the immune system. This reaction would otherwise occur much later and in more extensive lesions and associated with greater scarring [7,8].

Needling affects the cerebrospinal fluid (CSF) concentrations of naturally occurring opiate substances: dynorphin (acting at spinal level), endorphin (acting within the brain) and enkephalin (acting both in the brain and on a spinal level). Endorphins and enkephalin are potent blockers that affect pain arising from the musculoskeletal system. Dynorphin is a

Table 1 – Overview of active participation in Congresses in the period 1988-2013.

1988	ICMART	Prague, CSSR	First aid of acupuncture in burn trauma treatment
1996	ICMART	Nicosia, Cyprus	First aid of acupuncture in burn trauma treatment
1998	ICMART	Miyazaki, Japan	First aid of acupuncture in burn trauma treatment
1998	SA	Recife, Brazil	First aid of acupuncture in burn trauma treatment
1999	ICMART	Riga, Latvia	The use of acupuncture in complex therapy of burn trauma
2000	ICMART	Vienna, Austria	The use of acupuncture in complex therapy of burn trauma
2001	ICMART	Berlin, Germany	The use of acupuncture in complex therapy of burn trauma
2005	ICMART	Prague, Czech Republic	The use of acupuncture in complex therapy of burn trauma
2005	EXCO ICOM	Daegu, Korea	First aid acupuncture in the complex therapy of burn trauma
2006	ICMART	Washington DC, USA	First aid acupuncture in the complex therapy of burn trauma
2007	ICMART	Barcelona, Spain	Acupuncture and myofascial manual lymphatic drainage
2007	ICOM	Taipei, Taiwan	Acupuncture, lymphatic system and dysfunction in traumatology in complex therapy of burn trauma
2007	20th CA	PietraNeamt, Romania	Function changes in traumatology and their therapy—method “LOSANN”
2007	20th CA	PietraNeamt, Romania	The use of acupuncture in complex therapy of burn trauma
2008	ICMART	Budapest, Hungary	Acupuncture and myofascial manual lymphatic drainage in complex therapy of burn trauma
2008	ICMART	Budapest, Hungary	New methods in traumatology and their application in complex therapy of burn (Award for 3rd place)
2008	ICMART	Thessaloniki, Greece	Functional changes in traumatology and their therapy (BT)
2010	World Congress of Medical Law	Zagreb, Croatia	Legal, ethical and economic issues of complementary medicine in complex therapy of burn trauma
2010	18th ISSC	Gdansk, Poland	Legal and economic issues of CAM methods (Award for 3rd place in surgery)
2010	SSHL	Brno, Czech Republic	Physician's liability and parent's right in treatment of minors (burn trauma cases)
2011	NATO	Praha, Czech Republic	Military Health care Working Group, 1st aid with application of complementary standard in the frame of basic standard therapy
2013	9th Asia-Pacific Burn Congress	Hanoi, Vietnam	Burn trauma and first aid of acupuncture
2013	15th European Burn Association Congress	Vienna, Austria	Burn trauma functional pathology of lymphatic system and soft tissues
2013	15th European Burn Association Congress	Vienna, Austria	Burn trauma and first aid of acupuncture

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