

### Compression Effect Applied for Hypertension Treatment

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As a result of clinical-experimental studies, the possibility of non-medicament correction of arterial pressure (AP) by applying compression to chest was detected. The chest dosed compression appeared to cause a complicated reflex-hemodynamic reaction, decrease in the AP being the most favorable result. Evaluation of the therapeutic effects of compression of the chest is the object of this study.

A device we designed for this purpose was used. Compression was given to a group of patients with elevation of AP upon the clinical-instrumental examination, showed I-II St. of hypertension. Forty-four patients of both genders at the age of 31 to 48 years were included in the group. Studies performed demonstrated the dosed compression effect on chest of patients with hypertension to result in a persistent hypotension reaction. Treatment was carried out once a day for 7–10 days. For the period stated, patients were given no hypotension drugs. They were subsequently observed for 5–10 days following completion of their treatment. AP was measured before and after the compression. Mean diastolic pressure before treatment was  $168 \pm 4.1$  mmHg, diastolic pressure was  $97 \pm 3.9$  mmHg. Following the application of the compression procedure, the systolic pressure decreased at average of 7.2% and the diastolic pressure decreased 5.4%, making up 150/89 mmHg. Data obtained show the possibility for obtaining an immediate hypotensive effect, both in case of permanent hypertension and for hypertensive crisis.

Further studies of the compression therapeutic effects, both as a possible alternative use of drugs and as an independent treatment of hypertension may be considered as a promising therapeutic modality

**Key Words:** arterial pressure, chest compression

### National Hospital Tokyo Disaster Medical Center—The Philosophy for Disaster: It's Role and Function

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At the Tachikawa, large-scale disaster-response base, the disaster-related facilities of all relevant ministries and agencies have been stationed in a functional manner. In the event of a disaster, the base will act as a center for leading countermeasure activities, while the National Hospital Tokyo Disaster Medical Center will take charge of disaster-related medical care.

During normal periods, the Center will provide highly-advanced emergency medical care and comprehensive medical treatment, but also will commit itself to conducting clinical studies focusing on disaster-related medical care, as well as carrying out the education and training of medical practitioners, related health workers

and the general public.

The training and education in disaster for medical teams was repeated five times since the Center was established in July 1995. The Center, as one of the core National Centers offering disaster-related medical care over a large scale area, will make statements regarding its fundamental philosophy, function, and role.

**Key Words:** disaster medicine; education philosophy; research; training

### Precautionary Hospital Plan for Mastering Extreme Numbers of Accident Victims

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Disaster action plans are prescribed by law for all public buildings in Austria, especially for hospitals. They serve to protect human life and property in the event of danger or hazard (fire, earthquake, terrorism, etc.), and constitute part of the Austrian Civil Defense Order. In addition, public hospitals are required by law, to admit and treat accident victims.

To date, Austrian hospitals are not bound legally to have on hand appropriate action plans to cope with major disasters (avalanche, flood, aircraft crash, railroad accident, etc.) involving large numbers of victims. In order to be able to master such situations, hospitals have prepared precautionary plans at their own initiative. Most of these plans are similar.

The disaster action plan for the Innsbruck University Hospital was modeled closely after the guidelines for the Zurich University Hospital. The disaster event is reported to the hospital by rescue headquarters and triggers an alarm that can be one of varying degrees to match the severity of the event. Innsbruck University Hospital now can cope with the victims of a disaster up to the level of a third-degree alarm. For disasters of a more serious nature, the Civil Defense and Disaster Action Committee of the Tyrolean State Government takes over. This precautionary hospital plan covers rerouting of vehicles on the hospital grounds for orderly patient delivery, secondary triage, infrastructure for victims waiting for and undergoing treatment, recall of off-duty personnel, reassignment of space, ensuring availability of operating rooms, making information known to relatives and the public, and the organization of a central bed referral unit.

**Key Words:** alarms; disaster; hospital; hospital disaster plans; hospital planning; planning

### Regional Anesthesia in Emergency and Disaster Medicine

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Analysis of reports of the use of regional anesthesia allows prediction of wide prospects for the use of con-

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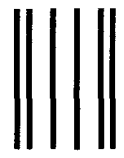
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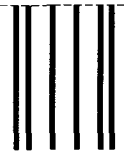
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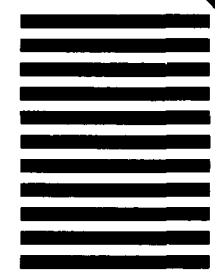


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ductive and epidural blockage in Emergency and Disaster Medicine. In these cases, regional anesthesia is preferable, since its use is associated with minimal negative effects on the patient's body and lower both early and late mortality, and it can be used to provide long-term analgesia.

We have created a modification of epidural anesthesia by using the development of resistance to local anesthetics. This method is based on introducing an anesthetic solution into epidural space while gradually increasing the volume and concentration of the solution used. This method allows us to use a more effective, minimal doses of anesthetic for creation of a threshold block. Thus, it is possible to reach a sufficient quality of anesthesia with minimal hemodynamic shifts. In this case, the blockade increases slowly, with attainment a complete anesthesia by using a minimal amount of anesthetic, yet the organism has time for gradual adaptation to vegetative denervation and for the start of compensational mechanisms.

This method has been used routinely in our department, and we have been happy with the results. This type of emergency anesthesia produces perfect analgesia and reduces the depression of cardiovascular system associated with sympathetic denervation.

**Key Words:** conductive anaesthesia; epidural analgesia

#### **Influence of Additional Organ Failure on Outcome of Patients with Postpartum Eclamptic Coma Managed By Urgent, Isolated Ultrafiltration** *V.E. Bukin*

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**Introduction:** Brain oedema caused by generalized hypoxia predetermines evolution of irreversible damage to the nervous system by eclampsia. Multiple organ-system failure syndrome is the major complication of the patients with severe eclampsia.

Our 16-year experience using Isolated Ultrafiltration (IU) in 89 postpartum patients with eclamptic coma (EC) indicated that it is a highly efficient procedure for the management of brain oedema. With the current interest in quality control and the challenge of budget restriction, it is necessary to evaluate the influence of organ failure on outcome of patients with postpartum eclamptic coma who urgently need IU.

**Material and Methods:** This retrospective study included 89 postpartum patients with EC (age: 17–38 years; gestation term: 27–40 weeks). Basic intensive care measures including the administration of mechanical ventilation, magnesium, thiopental, human albumin, and drugs to lower blood pressure, were not changed during the use of IU. Isolated hemoperfusion procedures were started 6–32 hours post partum (27 pts.) or after urgent section caesarea (62 pts.). Total IU volume:  $3 \pm 0.4$  L.

We analyzed the dysfunction of organs (encephalopathy, respiratory failure, renal failure, hepatic failure, circulatory failure) on the basis of rather rough manifestations before starting therapy with IU and dependence

of outcomes on the time between childbirth and beginning of IU.

**Results:** 20 patients had an isolated brain oedema (95% survived), 36 patients had additional organ failures (91.7% survived), and 33 patients with three or more auxiliary organ system failures (84.8% survived). Specifically, the type of organ failure influenced the chance of survival: 1) respiratory failure, 88%; 2) hepatic failure, 70.5%; 3) renal failure, 70.8%; and 4) circulatory failure, 36.3%. Of the 62 patients undergoing IU after first 6–12 hours post-partum, 59 survived, and 21 of 27 patients undergoing IU after more than 12 hours post partum survived.

**Conclusion:** In patients with postpartum eclamptic coma and three or more additional organ failures, the survival rate was reduced significantly. Circulatory failure influenced the outcome of these patients more than did respiratory failure and hepato-renal failure. IU application within first 6–12 hours after delivery increases survival chances in cases of eclamptic coma.

**Key Words:** brain oedema; isolated ultrafiltration; postpartum eclamptic coma; multiple organ failure

#### **Proposal for the Development of an Award of Excellence in Disaster Management Administered by the World Association For Disaster and Emergency Medicine (WADEM)**

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Recently, the world has experienced increased frequency and severity of disasters which have cost the international community hundreds of billions of dollars. Unfortunately, a substantial portion of these assets represent wasted resources due to inefficient utilization. Part of the problem is that many governmental and non governmental relief organizations lack effective management systems to coordinate, communicate, and assess their activities and outcomes.

Quality assurance methodology can improve cost-efficiency of response. The WADEM has established a Task Force on Quality Control of Disaster Management to develop international standards for evaluation of relief activities.<sup>1</sup> The next step is incorporation of these standards by the leading relief organizations. To encourage the latter, we propose the establishment of an Award designed to recognize organizational performance excellence of relief actions in the following categories: A) leadership; B) information management and analysis; C) strategic planning; D) human resource development and management; E) process management; F) organizational performance assessment; and G) satisfaction of relief recipients, donors, and other beneficiaries.

The premise of an International Quality Award is parallel to the Malcolm Baldrige National Quality of the USA Commerce Department that recognizes organizations for performance excellence. Organizations