

under mechanical ventilation and use of sedatives and muscle relaxants at intensive care unit (ICU).

The time required for reaching to target body temperature was shorter with combined methods than with conventional approaches. Also, no rebound of body temperature was observed with combined methods with Arctic Sun 5000[®].

Arctic Sun 5000[®] was considered minimally invasive and easy to introduce at ED. Overall clinical courses were fine without neurological dysfunction.

CONCLUSION. Treatment with extra-cooling devices combined with conventional approaches may be beneficial to patients with exertional heatstroke. Further investigations including large clinical trials are required.

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International prospective observational Study on intracranial Pressure in intensive care (ICU): The SYNAPSE-ICU Study. Preliminary data

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INTRODUCTION. Increased intracranial pressure (ICP) is one of the major clinical complications of acute brain injuries (ABIs) and correlates with poor outcome. ICP monitoring (ICPm) is the most common neuromonitoring modality used in intensive care units (ICUs). The indications for ICPm are mostly based on traumatic brain injury (TBI), whereas uncertainties remain for ICPm in non-TBI (acute subarachnoid haemorrhage (SAH) and intracerebral haemorrhage (ICH)). Moreover, practice about indications and use of ICPm in patients with ABIs is highly variable in high-income countries (HICs), while data on ICPm in low- (LICs) and middle-income countries (MICs) is scarce or inconsistent.

OBJECTIVES. SYNAPSE-ICU is an international, prospective, observational, cohort study (NCT03257904) designed to describe the current practice of ICPm using a worldwide sample. Aim is to quantify practice variations in ICPm and management in HICs, MICs and LICs, and to provide a correlation between ICPm and neurological clinical outcome (GOSE: Glasgow Outcome Scale Extended).

METHODS. From March 2018 to April 2019, all patients fulfilling the following inclusion criteria were recruited: age >18 years; ABI due to primary haemorrhagic stroke or TBI; Glasgow Coma Score (GCS) with Motor score (M) ≤ 5 at ICU admission or within the first 48 hours. Data related to clinical examination and to ICP interventions was recorded at ICU admission, at day 1, 3 and 7. GOSE was collected at discharge from ICU, from hospital and at 6-month follow-up.

RESULTS. To date, 41 countries around the world enrolled 2302 patients in 143 active sites (95 in Europe, 28 in America, 15 in Asia, 3 in Australia and 2 in Africa).

We described the main characteristics of the first 1000 recruited patients (68.0 % males, 32.0 % females, mean age 55.0 years ± 19.2

enrolled in HICs (87.5%), in upper-MICs (U-MICs) (6.7%) and in lower-MICs (L-MICs) (5.8%). Primary diagnosis was TBI in 56.0% of patients and non-TBI in 44.0% of them (19.1% SAH and 24.9% ICH). In the first week of ICU stay, ICP was measured in 585 patients (90.8% in HICs, 5.1% in U-MICs, 4.1% in L-MICs), whereas ICPm was never applied in 415 patients. ICPm patients had a 6-months lower mortality compared to no ICPm ones (40.0% vs 56.1%).

CONCLUSION. The high number of enrolled patients and the distribution of active ICUs will represent the worldwide variability in ICPm practice variations. Further analysis will be presented at the end of the study period.

REFERENCE(S)

1. The study received an award from the ESICM, and it is inserted in the ESICM research portfolio.

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Ventilatory Strategies in Patients with Severe Traumatic Brain Injury - Survey (VENTILO)

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INTRODUCTION. Severe traumatic brain injury (TBI) patients may develop acute respiratory failure or acute respiratory distress syndrome (ARDS) (1-2). Optimal ventilatory strategies in this setting are not well established.

OBJECTIVES. To survey practices in the respiratory management of adult TBI patients with and without ARDS.

METHODS. An electronic questionnaire, including 40 items and 3 different clinical scenarios (PaO₂/FiO₂: >300, 150-300, <150), was available on the European Society of Intensive Care Medicine (ESICM) website between November 2018 and March 2019. The survey was endorsed and promoted by ESICM.

RESULTS. Respondents (RSP) were 687 [472 (69%) from Europe]; mainly intensivists [328 (48%)] and anesthesiologists [206 (30%)]. A standard protocol for mechanical ventilation in TBI patients was utilized by 277 (40%) RSP and a specific weaning protocol by 198 (30%). The most frequently reported ventilator settings and respiratory targets according to acute lung injury severity are summarized in Table 1. The most frequent rescue strategies utilized in case of refractory hypoxemia despite conventional ventilator settings are represented by neuromuscular blocking agents [406 (88%)], recruitment maneuvers [319 (69%)] and prone position [292 (63%)].

CONCLUSION. Different practices on respiratory management of adult TBI patients with and without ARDS are identified in this survey. These findings may be helpful to define future investigations in this topic.

REFERENCE(S)

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- 2) The Survey was endorsed and promoted by ESICM.