Median length of stay in ICU for R/I (14 days, IQR 7.5–28.5) and F (15 days, IQR 8 –26) is longer than that of N patients (11 days, IQR 6–19.5). Patients in the R/I and in the F groups showed higher ICU mortality (F 25.5%, R/I 27% vs N 9%, $p < 0.001$) as well as higher 6-month mortality (F 40%, R/I 28% vs N 17.5%, $p < 0.001$) and higher incidence of 6-month unfavorable outcome (GOSE≤4 in F 62%, R/I 66% vs N 47.5%, $p < 0.001$).

CONCLUSION. The development of AKI seems to be an early phenomenon, associated with the presence of previous CV history. It is associated with increase LOS, ICU mortality and 6-month unfavorable outcome.

REFERENCE

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000838

Burden of intracranial hypertension in subarachnoid hemorrhage in relationship with the cerebrovascular autoregulatory status

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INTRODUCTION. In patients with Traumatic Brain Injury (TBI), impaired cerebrovascular autoregulation (CAR), decreases the ability of the brain to tolerate the burden of elevated ICP [1]. This burden is defined as the combination of the intensity and duration of events of elevated ICP. The association with the 6-month Glasgow Outcome Score (GOS) can be visualized with the color-coded plots proposed by Güiza [1]. In these plots, impaired CAR shifted the transition curve, which divides good ad poor neurological outcome, towards lower ICP values. This methodology can be applied to other neuro-monitored patients. The proposed study aimed to investigate whether CAR status plays a role in determining the ability of the brain to sustain elevated dose of ICP after subarachnoid hemorrhage (SAH).

METHODS. Retrospective analysis of ICP and mean arterial blood pressure (MABP) time series of 98 patients with severe-grade SAH, prospectively collected in two large European centres, (Innsbruck University Hospital (Austria); San Gerardo University Hospital, Monza (Italy)). The methodology proposed by Güiza [1] was used to visualize the association of the dose of ICP with outcome, for active and passive CAR.

RESULTS. The transition curves resulting from the evaluation of ICP dose events during passive and active CAR presented a negligible difference with the "all-events" curve, Fig 1. This may be due to the low prevalence of prolonged elevated ICP, the median [IQR] percentage of ICP monitoring time above 20mmHg was equal to 6.2 % [0.4 - 6.5], where CAR status may have a stronger impact on outcomes.

CONCLUSION. No difference in the association between the ICP dose burden and outcome could be demonstrated for active and passive CAR. In absence of prolonged intracranial hypertension other factors, apart from CAR status, may have a more important role in determining the outcomes.

REFERENCE

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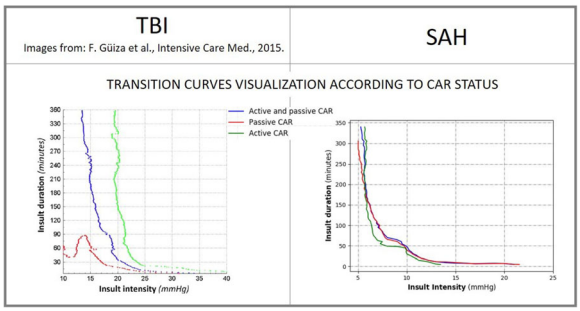

Fig. 1 (abstract 000838). See text for description

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Continuous monitoring of frontal slow wave activity in early prediction of neurological outcome after cardiac arrest

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INTRODUCTION. Estimation of patients' neurological prognosis after cardiac arrest is challenging and reliable prediction of the outcome can usually be made only after few days. Lack of slow waves in electroencephalogram (EEG) has been associated with hypoxic ischemic encephalopathy [1]. Quantification of slow wave activity offers a potential tool for early prediction of neurological outcome in comatose cardiac arrest survivors.

OBJECTIVES. To investigate the association between continuously measured frontal slow wave activity and neurological outcome at six months after cardiac arrest.

METHODS. In this study (NCT03485781), data from 66 comatose cardiac arrest survivors treated in the intensive care units (ICUs) of Helsinki University Central Hospital and Oulu University Hospital was used. EEG was recorded from the ICU admission until 48 h from return of spontaneous circulation (ROSC) using self-adhesive disposable forehead electrode and wireless measurement device. The slow wave activity was determined by calculating the low-frequency (< 1 Hz) power of EEG. The low-frequency activity at different time points after ROSC was statistically compared between patients with good and poor neurological outcome using Wilcoxon rank sum test. The outcome was defined by evaluating the patients' neurological recovery at six months using Cerebral Performance Category (1-2 = good outcome; 3-5 = poor outcome).