

## References

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## A716

## Blood biomarkers for acute stroke prognostics

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**Background and purpose:** Stroke is an important cause of death worldwide, and the majority of stroke survivors suffer from some form of residual disability. This study aimed to investigate the association of blood biomarkers with stroke scales and their predictive value after acute stroke at the time of admission until hospital discharge.

**Design and methods:** We investigated 60 patients with acute stroke who were admitted within 24 h of event onset at the intensive care unit or neurovascular emergency unit of Clínicas Hospital. All patients provided venous blood samples for the measurement of neuron-specific enolase (NSE), S100 $\beta$  protein (S100 $\beta$ ), interleukin-6 (IL-6), C-reactive protein (CRP) and brain-derived neurotrophic factor (BDNF) within 24 h of the acute event, on the third day and on the fifth day after the stroke. Neurological stroke severity and global disability were determined with the National Institutes of Health Stroke Scale (NIHSS) and modified Rankin Scale (mRS) at the same three times of blood collection and at the time of hospital discharge.

**Results:** The serum levels of the S100 $\beta$  protein, IL-6 and CRP seem to constitute the best panel of biomarkers after acute stroke in this study. When patients were subdivided into two groups according to the NIHSS (NIHSS  $\leq$  6 and NIHSS > 6) and mRS (mRS  $\leq$  3 and mRS > 3) scores, which were used as neurological outcome measures, both neurologic scores for good outcome (NIHSS  $\leq$  6 and mRS  $\leq$  3) at hospital discharge were significantly related to the S100 $\beta$  protein and IL-6 levels at all of the measured time points. Among the analyzed blood markers, S100 $\beta$ , IL-6 and PCR levels significantly correlated with the stroke scales and prognostic value.

**Conclusion:** Blood biomarkers may be useful in acute stroke either by suggesting stroke severity or providing a prognostic value. The addition of the S100 $\beta$  protein, IL-6 and CRP to previously validated stroke scales slightly improves the ability of these scales to predict outcome.

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## Posterior reversible encephalopathy syndrome (PRES): clinical features and outcomes in ICU patients

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**Introduction:** PRES is a clinicroadiological syndrome characterised by transient neurological symptoms with vasogenic edema involving the posterior cerebral region.

**Objectives:** To study the Clinical features and outcomes of patients with PRES admitted to our ICU.

**Methods:** This was a prospective observational study done over period of two years (2014–15). We included all adult patients admitted to our ICU with the following criteria (1) acute onset neurologic symptoms including headache, encephalopathy, seizure, visual disturbance, or focal deficit; (2) focal vasogenic edema on brain imaging and (3) clinical proof of reversibility. Data was collected on demography, co-existing illness, and admission severity of illness, neurological symptoms, systolic and diastolic blood pressure, treatments initiated and MRI findings. Outcome data collected included, mortality, ICU ALOS, no of ventilator days and neurological disability assessed by modified Rankin scale (MRS).

**Results:** 14 patients were admitted with PRES. 13 patients were females, their mean age was 31.5( $\pm$ 8.3) years.

Etiology of PRES include eclampsia (n = 9[64.2 %]), lupus nephritis (n = 3[21.4 %]), chronic kidney disease (n = 1[7.1 %]) and hypertension (n = 1[7.1 %]). Most common presenting symptom was seizure (92.8 %), followed by visual disturbance (42.8 %), headache (42.8 %), encephalopathy (14.2 %) and status epilepticus (14.2 %).

Mean APACHE II & SOFA scores were 8.5( $\pm$ 6.9)&2( $\pm$ 1.7) respectively and GCS on admission was 12.3( $\pm$ 2.9). High blood pressure was seen in 12 patients (85.7 %), their mean systolic and diastolic pressures were 173( $\pm$ 9.1) /110( $\pm$ 5.5) mmhg respectively. MRI showed parieto-occipital region was most commonly involved (92.8 %), followed by frontal lobe (42.8 %).

Blood pressure was controlled with IV antihypertensive agents and magnesium sulphate was given for eclamptic patients. Time taken for control of blood pressure 31.25( $\pm$ 12) hours and time taken for awakening was 1 (median) hour (range 1–60). 7(50 %) patients required ventilator support of which 3 patients were postoperative caesarean section for eclampsia and 4 patients had neurological deterioration and 3(21.4 %) patients required hemodialysis. ICU ALOS was 4.35( $\pm$ 2.4) days and mean ventilator days was 1.7  $\pm$  (2.0) days. One patient [1/14(7.4 %)] died of multiorgan failure and 13 patients were discharged with no residual neurological deficit (Modified Rankin Scale=0).

**Conclusions:** PRES is a potentially reversible disorder with prompt recognition and control of blood pressure.

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**Table 72 (abstract A717).** Patient characteristics

Demography	n=14
Age mean ( $\pm$ SD)	31.5(10)
Female	13(92.8)
Male	1(7.14)
Etiology of PRES	n=14(%)
Eclampsia	9(64.2)
Lupus nephritis	3(21.4)
Chronic kidney disease	1(7.1)
Hypertension	1(7.1)