

POSTER PRESENTATION

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# Brain injury biomarkers and inflammatory markers like pronostic factors on mortality in patients with spontaneous intracranial hemorrhage (medical-adults intensive care)

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## Objective

To value the usefulness of brain injury biomarkers (BIB) and inflammatory markers (IM) to predict mortality in spontaneous intracranial hemorrhage patients (SIH).

## Material and Methods

BIB (D Dimer (DD), BNP and CRP) were determined at admission, 1, 2, 3 and 7th day; IM at admission and 7th day. Descriptive analysis % and Median (minimal/ maximum). Independent samples T-student to compare means ( $p < 0.05$ ). A binary logistic multivariate regression analysis was performed (95% CI OR).

## Results

103 patients with SIH. 66% were men. Age 61.8 ( $\pm 12.7$ ). Overall Mortality 37%. ICU stay 7 days (1-55). Glasgow Coma Scale 12 (3-15). SIH 20.18 cc volume (1-252).

The univariate correlation between of BIB and MI with mortality in Table 1. In multivariate analysis: protective factors were BNP at admission (OR 1.1, 95% CI 1.1-1.2 ( $p 0.02$ )), DD at 7th day (OR 1.1, 95% CI 1.1-1.3 ( $p 0.009$ )) and Prealbumin at 7th day (OR 0.9, 95% CI 0.8-0.9 ( $p 0.03$ )).

## Conclusions

BNP at admission, 24 h and 48 h and DD as late marker at 48 h, 72 h and 7th day were correlated with mortality

**Table 1. Relationship brain injury biomarkers and inflammatory markers with mortality; Median  $\pm$  SD. BIB: Brain injury biomarkers; IM: Inflammatory markers; BNP: Brain natriuretic peptide; DD: D Dimer**

BIB and IM		Dead	Alive	P
BNP (pg/ml)	Admission	223,5 $\pm$ 318,46	82.41 $\pm$ 95,55	0,001
	24 h	175,96 $\pm$ 202,08	87.84 $\pm$ 77,19	0,002
	48 h	142.32 $\pm$ 156,01	94.12 $\pm$ 82,66	0,04
DD ( $\mu$ g/L)	48 h	1915,8 $\pm$ 1631,5	883,7 $\pm$ 1368,6	0, 001
	72 h	2525,27 $\pm$ 2142,47	1051.92 $\pm$ 1254,15	0,000
	7th d	3677.07 $\pm$ 2224,72	2150.9 $\pm$ 1820,42	0,005
Leukocytosis	Admission	12037,5 $\pm$ 4806,8	10241,8 $\pm$ 3624,2	0,03
Albumin (g/dl)	Admission	3,4 $\pm$ 0,52	3,7 $\pm$ 0,55	0,01
Prealbumin (mg/dl)	Admission 7th d	18,97 $\pm$ 6,78 16,74 $\pm$ 7,28	22.30 $\pm$ 5,36 21,22 $\pm$ 8,03	0,008 0,02

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in patients with SIH. IM correlated with mortality: leukocytosis, albumin and prealbumin at admission and prealbumin, ferritin and haptoglobin at 7th day.

Multivariate analysis found significance for increased risk of death BNP at admission and DD at 7th day; and protective factor was Prealbumin at 7th day.

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