

POSTER PRESENTATION

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Prognostic factors of 30-days mortality in primary intracerebral hemorrhage

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Introduction

Spontaneous intracerebral hemorrhage (ICH) carries a high mortality rate and predictive factors of short-term outcome are of great importance. Studies have shown that image volumetric evaluation of hematoma, in the initial computed-tomography (CT-scan) of the brain, has an important predictive value of 30-days mortality.

Objectives

To review patients (pts) with ICH, in a five-year period (January 2010-December 2014) and to assess the predictors of 30-days mortality. As the biggest diameter accounts to the calculation of the hematoma blood volume, we examined a possible association between this diameter and early fatal outcome.

Methods

Retrospective analysis of 30-days mortality in 62 pts (49 male, 13 female, mean age $65,74 \pm 11,18$) hospitalized in our ICU. Age, Apache II score, Sofa score and GCS were recorded on admission day. CT-scan was performed in order to determine the site of the ICH, the presence of intraventricular hemorrhage (IVH) and the amount of ICH. Volume was estimated using the ABC/2 method and the biggest diameter was recorded separately. Statistical analysis was performed by using SPSS V-20 soft-ware. Variables were described using mean and SD (continues variables) or category percentages (categorical variables), stratified for survivors and nonsurvivors. Independent Samples t-test for Equality of Means, Shapiro-Wilk test of Normality, Pearson correlation and Pearson Chi-Square test were used and level of significance was set at $p < 0,05$.

Results

38 pts (group I) nonsurvived in the ICU during the first month and 24 pts (group II) survived and discharged from acute hospitalization. The overall mortality was 61,29%. See results in table 1.

Biggest diameter of hematoma and ICH volume have a positive linear correlation (Pearson correlation $R^2 = 0,664$). Furthermore, we attempted to establish a possible association between the BD and the 30-days mortality. We divided our pts in: Group A (12 pts): $BD \leq 4$ cm and Group B (50 pts): $BD > 4$ cm. One patient died in group A (8,3%), while 37 pts died in group B (74%) (Pearson Chi-square test $p < 0,0001$, odds ratio: 0,032).

Conclusions

We demonstrated that Apache II score, Sofa score, GCS on admission and ICH volume are independent predictive factors of 30-days mortality in pts with ICH. The size of the biggest diameter (cut off 4 cm) has a strong association with the 30-days mortality, thereby it could be an independent predictive factor in these group of patients.

Table 1

	Group I	Group II	p value
Age	$65,97 \pm 11,57$	$65,38 \pm 10,76$	$p = 0,8$
Apache II score	$23,13 \pm 5,60$	$15,63 \pm 6,14$	$p < 0,0001$
Sofa score	$9,16 \pm 2,66$	$5,96 \pm 2,56$	$p < 0,0001$
GCS	$4,76 \pm 1,79$	$8,79 \pm 3,09$	$p < 0,0001$
ICH volume (cm ³)	$62,68 \pm 23,20$	$27,42 \pm 23,22$	$p < 0,0001$
biggest diameter (BD) (cm)	$6,9 \pm 1,26$	$4,58 \pm 1,60$	$p < 0,0001$

[Comparison of 30-days mortality]

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References

1. Szepesi Rita, Szell Katalin Ibolya, Csiba Laszlo: **New Prognostic Score for the Prediction of 30-day outcome in Spontaneous Supratentorial Cerebral Haemorrhage.** *Biomed Research International Volume* 2015 [http://http:dx.doi.org/10.1155/2015/961085].
2. Claude Hemphill J, Bonovich David, Tuhim Stanley: *The ICH score: A simple, reliable grading scale for Intracerebral Hemorrhage Stroke* 2001, **32**:891-897.

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