

POSTER PRESENTATION

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Correlation of hyponatremia, leukocytosis, hypomagnesemia and fever after sah with delayed cerebral ischemia and poor outcome

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Introduction

Early identification of patients at an increased risk for delayed cerebral ischemia (DCI) and poor outcome could allow more aggressive therapy and influence better outcome.

Objectives

The aim of this study was to determine a predictive association of hyponatremia, hypomagnesemia, fever and leukocytosis with DCI and poor outcome.

Methods

We prospective enrolled 68 patients with SAH treated from March 2011 to May 2013. Serum levels of sodium, magnesium and leukocyte count were determined at least once a day during the first 10 days after SAH. All patients underwent noncontrast CT scan 9 ± 2 days after SAH. DCI was defined as one or more of the next parameters: a new focal neurological deficit, decline for 2 or more points on the mGCS scale or a new hypodensity on CT scan. The outcome was assessed after 6 months using the eGOS scale.

Results

48% of the patients recruited had delayed cerebral ischemia. Logistic regression model showed significant impact of hyponatremia ($p=0,036$ OR=4.08 95% CI = 1.09 - 15.26) on DCI and poor outcome ($p=0,034$ OR=5.11 95% CI = 1.13 - 23.14). We obtained strong correlation of leukocytosis ($p = 0.013$) with DCI and poor outcome ($p=0,016$). Association of non infectious fever and hypomagnesemia with DCI existed but wasn't significant enough.

Conclusions

Our results confirmed association of hyponatremia and leukocytosis with greater risk of developing DCI and poor clinical outcome.

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