

POSTER PRESENTATION

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Multi-detector CT-angiography is useful in predicting haematoma expansion in patients with acute primary intracerebral hemorrhage

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Background

Primary ICH expands in up to 50% of cases and in these treatment with haemostatic compounds can be potentially beneficial. Spot detection on multi-detector CT-angiography (MDCTA) studies may identify ongoing bleeding and thus predict haematoma expansion.

Aim was to assess the frequency, the prognostic impact and haematoma volume increase in patients with positive spot sign in comparison to no spot sign.

Methods

A non-contrast CT scan (NCCT) and MDCTA was performed in patients with ICH within 3 hours. A NCCT was performed next day. Radiologists reviewed MDCTAs for spot sign and estimated the haematoma volume.

Results

In 41.4% spot sign was observed. There was a strong trend that positive spot sign predicted short term mortality 35,9 (CI 0,857;1503,2) ($p = 0,041$) adjusted for age and acute haematoma volume. Mean acute volume was 49,0 ml in patients with spot sign vs. 19,2 ml, ($p = 0,001$). The mean volume increase in patients with spot sign was 12,0 ml corresponding to a 24,5% increase with spot sign vs. 10,4% in other patients ($p = 0,009$).

Conclusion

Spot sign identifies patients with later haematoma expansion, and may be useful in identifying patients for

proof of principle trials in acute ICH, e.g. testing haemostatic compounds or blood pressure reduction.

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