

Management and outcome of in-hospital ischemic strokes eligible to thrombolysis: Findings from the RESUVal registry

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Background & Objectives

It is logical to believe that stroke occurring when the patient is already hospitalized for another diagnosis or procedure to benefit from a better management with rapid transfer to primary stroke units or to a comprehensive stroke center.

But literature has shown that in-hospital stroke (IHS) were associated to longer management delays and tended to be more severe than out-of-hospital strokes (OHS) and associated to worst prognosis.

We aimed to investigate management and outcome of IHS compared to OHS from the French RESUVal registry.

Material & Method

We retrospectively enrolled from the RESUVal registry all patients with acute ischemic stroke eligible to intra-venous and/or intra-arterial tPA, occurring from October 2010 to December 2016, with no age or delay limitations.

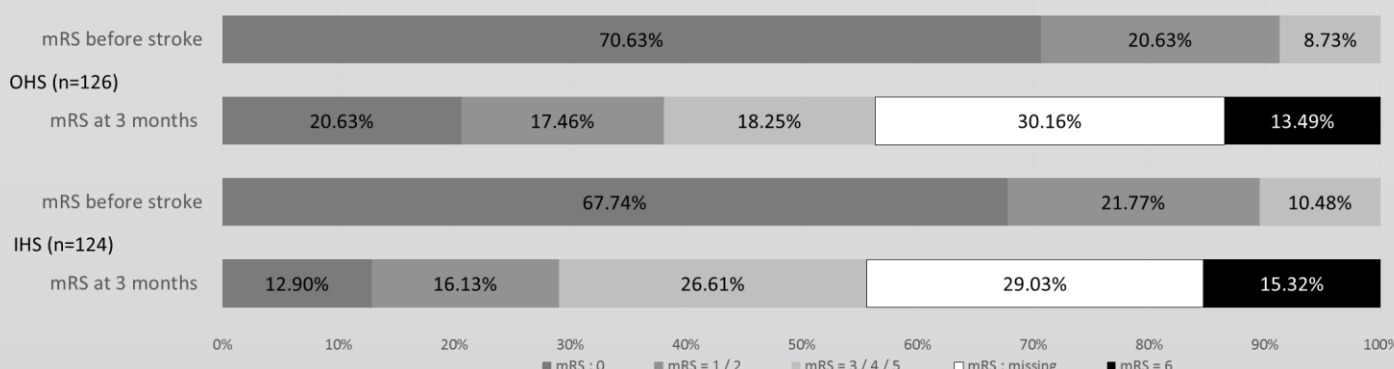
We performed unadjusted and adjusted analysis by fitting a propensity score using the nearest neighbour method within a specified caliper distance (NNM-CD). The matching criteria were cardiovascular history and functional status at admission (sex, age, NIHSS score at admission, history of personal coronaropathy, atrial fibrillation, overweight or obesity, dyslipidemia and diabetes).

Results

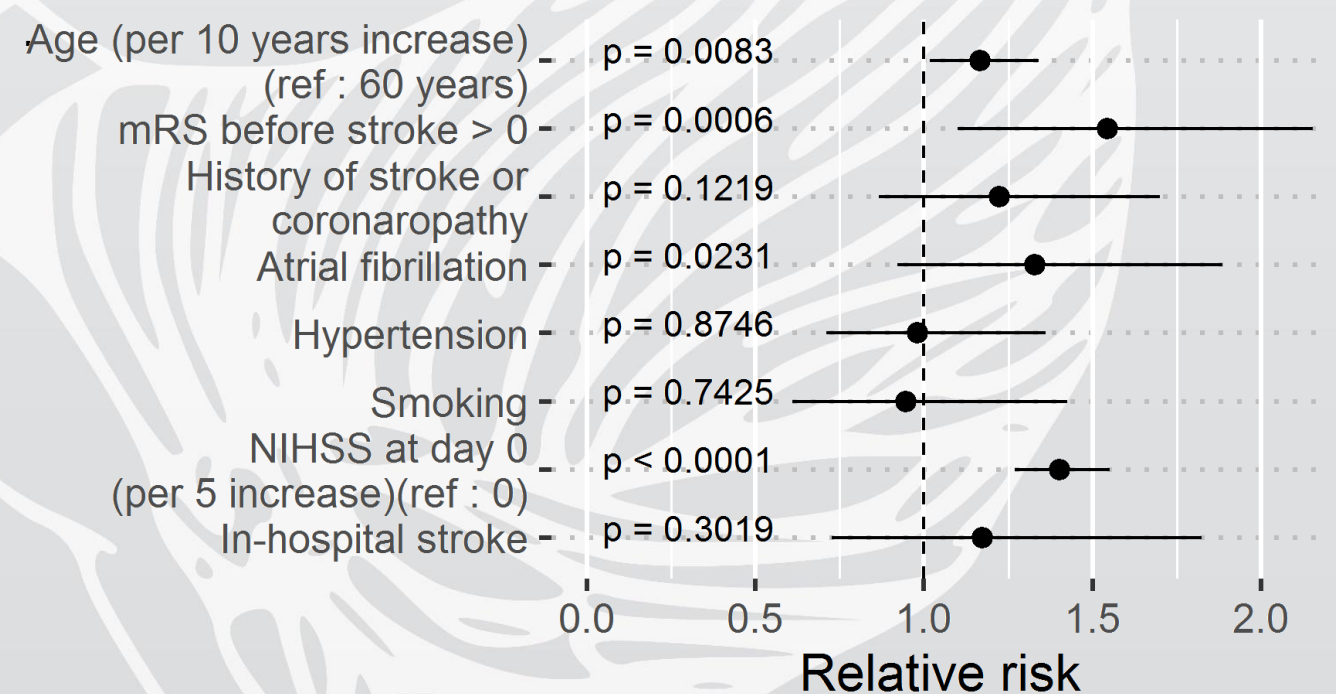
Study Population. We enrolled 137 IHS and 2665 OHS. IHS patients were more associated with risk factors than OHS with more cardiovascular history (42.34% vs 20.82%, $p < 0.0001$), hypertension (69.34% vs 54.56%, $p = 0.0015$) and more active smokers at admission (29.20% vs 21.23%, $p = 0.0465$).

Delays. The delay first admission-hospital and -thrombolysis (door-to-needle) was 40 minutes shorter for IHS patients (59 [45;82] vs 102[78;141], $p < 0.0001$). The delay symptom-thrombolysis was 35 minutes shorter for IHS (120 [90;150] vs 155 [125;195], $p < 0.0001$) as well as the delay symptom-imaging (MRI/CT-Scan) (67 [36;105] vs 116 [89;153], $p < 0.0001$).

Functional outcome.



Multivariate analysis. The occurrence of stroke when the patient is hospitalized was not a determinant for worst prognosis at 3 months (death or modified Rankin Score ≥ 3) (RR 1.17, IC 95% [0.87;1.59], $p = 0.3019$).



Conclusion

Federation of emergency physicians and neurologists with common guidelines have led to a high-quality of care in the acute ischemic stroke management.

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