Feasibility of early intensive blood pressure lowering in intracerebral hemorrhage - use of a simple systematic treatment algorithm

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1. Introduction

More than 75% have elevated blood pressure (BP) in the acute phase of intracerebral hemorrhage (ICH).

ICH treatment at Aarhus University Hospital: Keep systolic BP < 140 mm Hg.

→ It is associated with decreased hematoma expansion and a borderline reduction of disability or death after 3 months¹.

2. Aim

To investigate whether a rapid BP reduction can be obtained in everyday clinical practice using a simple treatment algorithm.

3. Method

The algorithm:

Prospective single-center cohort study during one year.

157 acute patients with spontaneous ICH were included.

134 patients with systolic BP > 140 mm Hg were treated.

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Conflicts of interest: None

4. Results

	Stratified by symptom onset to acute imaging (CT/MRI)		
Characteristics for the 134 patients	< 6 hours (n = 88)	> 6 hours (n = 46)	P Value
Age, median (IQR)	76 (66-83)	80 (75-84)	0.039
NIHSS acute, median (IQR)	13 (7-20)	8 (3-16)	0.040
Mortality at 3 month, n (%)	20 (23)	13 (28)	0.480
mRS 3-6 at 3 month, n (%)	71(81)	42 (91)	0.108

Within 1 hour, from admission, 29% of patients with a symptom duration <6 hours reached target systolic BP and 76% within 6 hours.

For the patients with a symptom duration >6 hours 41% and 68% reached target BP after 1 and 6 hours, respectively.

Acute antihypertensive drugs used: 93% were treated with glyceryl trinitrate, 95% with labetalol and 60% with nimodipine.

Only 2% were treated with other drugs not mentioned in the algorithm.

Conclusion

Rapid BP reduction can be obtained in everyday clinical practice using a simple treatment algorithm.

Reference: 1. Anderson CS, Heeley E, Huang Y, Wang J, Stapf C, Delcourt C, et al. Rapid Blood-Pressure Lowering in Patients with Acute Intracerebral Hemorrhage. N Engl J Med. 2013;368(25):2355–65

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