

BLOOD PRESSURE MANAGEMENT IN ACUTE ISCHEMIC STROKE – THE LOWER THE BETTER?

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Historical stroke cohorts reported a curvilinear relationship between blood pressure (BP) and clinical outcome. However, those studies were made disregarding recanalization state and predated current revascularization strategies.

We aimed to investigate the relationship between BP in the first 24 hours after ischemic stroke and clinical outcome in patients submitted to intravenous and/or intra-arterial recanalization treatments.

Consecutive acute stroke patients treated with intra-venous thrombolysis and/or intra-arterial therapies were enrolled in a retrospective cohort study. BP measurements were performed on regular intervals during the first 24 hours after stroke onset. The mean systolic BP (SBP) and diastolic BP (DBP) during the first 24 hours post-stroke were calculated. Recanalization was assessed at 6 hours by transcranial color coded Doppler, angiography or angio-CT. Functional outcome was assessed at 3 months by modified Rankin scale. Linear and quadratic multivariate regression models were performed to determine associations between BP and functional outcome.

We included 674 patients, mean age 73.28 (SD: 11.50) years, 363 (53.90%) male. Arterial recanalization was documented in 355 (52.70%) patients. In multivariate analyses SBP and DBP in the first 24 hours post-stroke show a “J”-shaped relationship with functional outcome in the whole population and in the non-recanalized patients. Recanalized patients show a linear association with functional outcome.

Previous concepts remained true regarding non-recanalized patients, however in recanalized patients lower systemic BP was associated with better outcome raising questions about features of this population, if there's any room for active treatment and if so, how low should we go.