



## Comment on article of Zheng J, Xu R, Liu G, Guo Z, Sun X (2018): effect of premonitory hypertension control on outcome of patients with aneurysmal subarachnoid hemorrhage

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Dear Editor,

Identification of modifiable risk factors for aneurysmal subarachnoid hemorrhage (aSAH) and for impaired outcome after the bleeding is of great importance for decreasing the incidence of this disease and improving the outcome. But, it looks like that these factors are not the same; they are different for aSAH occurrence and for poor outcome after aSAH [2].

Undoubted modifiable risk factors for aSAH are cigarette smoking, alcohol consumption, and hypertension [3, 6, 8, 9]. Although the significance of hypertension for aSAH seems to be modest [3, 6, 8], it may also be a significant risk factor for impaired outcome after aSAH [1, 4, 5].

The article of Zheng et al. [10] is important because it confirms that good control of preexisting hypertension has favorable effect on aSAH outcome. The results have shown that patients with uncontrolled hypertension were presented with radiologically more severe aSAH and worse clinical grade. Also, they had a higher incidence of aneurysm rebleeding, hydrocephalus, and cerebral vasospasm than those with well-controlled hypertension which remained significant after adjusting for age and poor Hunt-Hess grade.

The chronic hypertension induces hypertrophy of the arteriolar smooth muscle cells and shifts the cerebral autoregulation curve to the right [7]. This shift and narrowing of small arteries may render hypertensive patients more susceptible to

cerebral ischemia during aneurysm rupture when a transient decrease in cerebral circulation occurs which leads to worse outcome.

This article suggests that antihypertensive therapy can be the powerful arm for the improving of aSAH outcome.

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