Cerebral vasospasm after subarachnoid hemorrhage from severe arteriovenous malformation

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Dear Editor,

We read with great interest the article entitled “Outcome of severe arteriovenous malformation-related intracranial hemorrhage: the importance of cisternal subarachnoid hemorrhage and early seizures.” by Rahme et al. [4]. The authors reviewed the records of 16 consecutive patients who presented with severe arteriovenous malformation (AVM)-related intracranial hemorrhage. They reported that three patients, who had subarachnoid hemorrhage (SAH), died from extensive bihemispheric infarction and refractory intracranial pressure. Statistical analysis revealed that SAH and early seizures were significantly associated with death. We completely agree with the authors’ findings and wish to provide further comment. Cerebral vasospasm after SAH from AVM has been reported to occur in 8–31% of patients [1, 3]. We believe that cerebral vasospasms might be one of the attributable factors for cerebral infarctions in the three patients who died in the authors’ series. We consider that physicians need to be particularly aware of cerebral vasospasm in patients with massive SAH from AVM, and that the threshold of digital subtraction angiography, computed tomography angiography, or magnetic resonance angiography should be lowered for early detection of cerebral vasospasm in patients with SAH from AVM. Additionally, nimodipine, nicardipine, intra-arterial papaverine, or angioplasty may be efficient for preventing or treating cerebral vasospasm after SAH from AVM [2, 3, 5]. However, treatment of cerebral

vasospasm may augment blood flow to an untreated AVM and promote early rebleeding, especially in cases with untreated intranidal aneurysms [2, 3, 5]. Early AVM resection can prevent rebleeding and also enable treatment of cerebral vasospasm. We consider that early AVM resection and awareness of cerebral vasospasm are required in patients with massive SAH from AVM.

Conflicts of interest None.

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