Spice, reversible cerebral vasoconstriction, and intracranial hemorrhage

There is a view prevalent in society that cannabis and its synthetic analogues are safe. However, there are increasing reports of ischemic stroke coming on during or soon after the use of cannabis and its synthetic analogues.1,2 Patients tend to be younger and without traditional vascular risk factors. A number of mechanisms have been proposed, including cardiac embolism, reversible vasoconstriction, and cerebral arteriopathy.

Two young patients with subarachnoid hemorrhage, one with intraparenchymal hemorrhage and the other with multifocal ischemic stroke, are presented in this issue of Neurology®.3 Both patients had used the synthetic marijuana “spice” and one had also used nonsynthetic marijuana. Changes seen on digital subtraction angiography consistent with cerebral vasoconstriction improved with intra-arterial verapamil. In reporting subarachnoid and intraparenchymal hemorrhage, the authors have expanded the spectrum of adverse effects following the use of synthetic cannabinoids, and have confirmed that reversible cerebral vasoconstriction is a likely cause of stroke in at least some patients.

Reports such as this one emphasize the need for clinicians to ask about the use of, and screen patients for, cannabis and its synthetic analogues, particularly where there are no other stroke risk factors. Vascular imaging with CT or magnetic resonance angiography and even digital subtraction angiography should be considered where no other cause of stroke has been identified. Those patients with history of recent use of, or positive screens for, these agents should be counseled against further use as recurrent stroke has been reported with repeated exposure.


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