Response to Letter Regarding Article, “Cannabis-Related Stroke: Myth or Reality?”

Response:

We thank Dr Parakh for his letter that examined important issues on the potential role of smoking tobacco in the causation of stroke in cannabis users.

In our article, we reviewed the 59 cases of stroke in cannabis users described in the literature. All but 1 of these patients smoked cannabis and most of them were also habitual tobacco users. It is, therefore, difficult to dissect out individual’s risks of stroke for cannabis and for tobacco use.

The identification of their mechanisms in stroke may, however, help us to distinguish their different role. From our point of view, reversible multifocal intracranial stenosis is one of the main convincing explanations of stroke in cannabis users. Indeed, in a prospective series of 48 young ischemic stroke patients, we showed that 10 of the 13 cannabis users had multifocal intracranial stenosis, which were reversible when patients stopped their cannabis consumption. There was a strong relationship between cerebral vasostenosis and cannabis abuse in these young stroke patients. No other factor (including tobacco use) seemed to be related independently to multifocal intracranial stenosis. In this series and in the literature, no patient who consumed tobacco alone had the same specific arterial intracranial pattern.

Tobacco is a well-known cardiovascular risk factor that induces other arterial abnormalities (such as atherosclerosis) that are not reversible when patients discontinued their consumption.

Reversible multifocal intracranial stenosis induced by cannabis in stroke patients is a similar entity that seems to fall under the descriptive heading of reversible cerebral vasoconstriction syndrome. Reversible cerebral vasoconstriction syndrome is a clinicoradiological syndrome characterized by recurrent severe headache (associated or not with seizures or focal deficits) and diffuse segmental cerebral arterial vasoconstrictions that are reversible within 3 months. Cannabis, which is a vasoactive agent, is a precipitating factor of reversible cerebral vasoconstriction syndrome; however, to our knowledge, there is no description of reversible cerebral vasoconstriction syndrome induced by tobacco use alone.

Thus, although we do believe that epidemiological studies are needed to confirm our results, we suggest that cannabis per se is likely to be involved in stroke.

Disclosures

None.

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