Minor Strokes Are Not Benign – Whether From Carotid Disease Or Other Causes

Emmanuel Houdart

Service de Neuroradiologie
Hôpital Lariboisière, Paris, France

Disclosure

• None

Minor strokes definition

• Small volume stroke occurring in functional area “strategic small infarct”
• Stroke without immediate clinical expression that impairs cognitive function with time

Small “strategic” stroke

• Patient treated of an Acom aneurysm
• Awoke without motor deficit
• However, had loss of recent memory (Korsakoff syndrome) due to infarct of a perforator feeding the trigon

Another strategic infarct in the anterior part of the thalamus

• Leading to loss of recent memory

First message

• Brain functionality is not limited to body muscles command!
• Memory, judgment participate to the honor of human being
• Cognition can be altered by infarct of either strategic area or by bilateral multiple small infarct whose best example in clinic is the “small vessel disease” of the brain
Small vessels disease of the brain

- Due to lesions of arteries < 400 µ diameter
- Narrowing or occlusion by « arteriolosclerosis »
- Leading potentially to a status called « vascular dementia »

Vascular dementia is the second most common cause of dementia after Alzheimer’s disease

- Symptoms include: cognitive dysexecutive slowing, forgetfulness, dysarthria, mood changes
- Main risk factors are advanced age, hypertension, diabetes, smoking, probably genetic factors

MRI typically shows disseminated subcortical areas of FLAIR hyperintensities with normal large arteries

Hyperintensities become confluent with time and can be associated with true lacunar infarct

Dementia with lacunar state: multiple disseminated infarcts < 15 mm diam located in subcortical areas
Dementia itself is probably due to disconnection of the fibers connecting frontal cortex and basal ganglia.

By parenthesis, even if a tight ICA stenosis was discovered, such an aspect of the brain is to me a poor indication for CEA or CAS as it will not change the prognosis.

So, whatever their mechanism – embolic or sclerotic – multiple small cerebral infarcts can lead to cognitive decline and are not benign.

Thank you for your attention.