Stroke Etiology

Cerebral ischemia and successive reperfusion are the prevailing cause of cerebral stroke. One of the main causes of stroke is carotid artery stenosis.

Extra cranial carotid artery dissection and vertebral artery dissection is an important cause of stroke, especially in young people.

Stroke etiology was classified as cardioembolism in 22 patients (59.4%), large-artery atherosclerosis in 8 (21.6%), and undetermined in 7 (18.9%). The clots from cardioembolism had a significantly higher proportion of red blood cells (37.8% versus 16.9%, P = .031) and a lower proportion of fibrin (32.3% versus 48.5%, P = .044) compared with those from large artery atherosclerosis. The proportion of red blood cells was significantly higher in clots with a susceptibility vessel sign than in those without it (48.0% versus 1.9%, P < .001), whereas the proportions of fibrin (26.4% versus 57.0%, P < .001) and platelets (22.6% versus 36.9%, P = .011) were significantly higher in clots without a susceptibility vessel sign than those with it.

The histologic composition of clots retrieved from cerebral arteries in patients with acute stroke differs between those with cardioembolism and large-artery atherosclerosis. In addition, a susceptibility vessel sign on gradient echo sequence is strongly associated with a high proportion of red blood cells and a low proportion of fibrin and platelets in retrieved clots [1].

There is conflicting evidence for whether or not the incidence of stroke is influenced by the daily temperature.

The daily temperature had measurable and different associations with the number of strokes and strokes subtypes in Seoul, Korea [2].

Bone diseases are among the most uncommon causes of stroke, but they should be considered as stroke cause in particular clinical scenarios. On the other hand, osteoporosis/osteopenia and increased fracture risk are well documented post stroke complications. The relationship between stroke and bone health is complex. The current facts suggest that these two conditions share same risk factors, but also are risk factors for each other. However, the evidence shows more clear effect of stroke on the bone health, than in the opposite direction. A extensive review of Mijajlovic et al. aimed to fill the huge gap of evidence about this topic, and since bone pathology is extremely rare cause of stroke, although a complex connection between these two conditions definitely exists [3].

References

1)
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