Clinical predictors of lacunar syndrome not due to lacunar infarction

The authors have identified 146 patients with a clinical lacunar syndrome, but with other than lacunar etiology in their prospective large single-center based stroke registry. They compare these patient with 733 other patients who had clinically and radiologically a lacunar stroke. These 146 patients has diverse etiologies including large-artery atherosclerosis, cardioembolism, intracerebral hemorrhage, and else. They found that sensorimotor stroke, presence of atrial fibrillation, and some other factors suggested other etiologies.

This is a large-sized study continuing the long tradition of lacunar stroke research done at the center of the authors. However, this issue has been largely investigated by the authors themselves and by others and the manuscript brings little novelty. The major advantage of the work is its large size.

The authors use 20 mm of diameter as an upper limit of size of deep brain infarcts. Most studies used 15 mm as the upper limit. However, the size alone is not a strong predictor. The authors should discuss why they preferred this limit.

Interestingly, previous works have addressed that pure motor stroke is a strong indicator of a lacunar stroke (f.i. see De Reuck et al, Eur J Neurol 2008), but almost half of their patients with other etiology had a pure motor stroke.

The manuscript is well-written and the message is very clear.

Abstract can be shortened. Especially results section of the abstract needs to be reworded as second sentence gives the impression that the percentages are from the 876 patients although they represent the distribution of 146 patients.

Length of hospital stay can be given in medians as it is not continuous data.

References are well-selected and adequate in number.

The tables are useful and fine as they are.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests'