Neuron-specific enolase and blood sugar level in ischemic stroke patients

Sir,

The recent publication on neuron-specific enolase and blood sugar level in ischemic stroke patients is interesting. Pandey *et al*. concluded that "Hyperglycemia predicts an increased risk of poor outcome after ischemic stroke, and it is reflected by a significantly increased level of neuron-specific enolase."[1] However, there are some concerns on the work. First, the glucose determination in this work is not a fasting blood sample and might be affected by eating. In addition, the measurement by glucose oxidase technique can be interfered by oxygenation status of the patients.[2] These factors must be considered in the interpretation of results. Second, the neuron-specific enolase is a biomarker the levels of which can be increased in certain tumors such as lung cancer.[3] The occult malignancy in stroke patients might also be possible and has to be ruled out. This needs to be considered as well. These limitations are important since increased neuron-specific enolase levels may not have any relationship to hyperglycemia. It is better if the mentioned possible confounding factors are already controlled. Indeed, to determine hyperglycemia in a single analysis of fasting blood sugar cannot reflect the glucose fluctuation. In laboratory medicine practice, to determine the trend of increased blood glucose in a patient, the use of fructosamine or hemoglobin A1C might be more suitable.

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