Risk factors affecting ischemic stroke: A potential side effect of antihypertensive drugs

Kazumitsu Nawata
Graduate School of Engineering, University of Tokyo
Email: nawata@tmi.t.u.tokyo.ac.jp

Abstract

Background
Stroke is a worldwide health problem, the world’s second-leading cause of death and third-leading cause of disability. Currently, the majority of stroke patients are ischemic stroke patients. It is necessary to evaluate risk factors to prevent ischemic stroke.

Data and Methods
The risk factors for stroke in the previous fiscal year were analyzed. They were divided into nonmodifiable and modifiable factors. The probit and ordered probit models were used in the study, with 59341 and 50542 observations used in the estimation of the models, respectively.

Results
Among the nonmodifiable factors, age, gender and cerebrovascular disease history are important risk factors. Cerebrovascular disease history is considered an especially important factor. Among the modifiable factors, taking antihypertensive drugs and recent large weight change are negative risk factors; however, sleeping well significantly reduces the probability of ischemic stroke.

Conclusion
It is essential that not only the patient but also the people around the patient, such as family members, college friends, and family doctors should share information on cerebrovascular disease history. Ischemic stroke might be considered an important side effect of antihypertensive drugs.

Limitations
The dataset was observatory. There are various types of antihypertension drugs, and their effects were not analyzed.

Keywords: stroke, ischemic stroke, cerebrovascular history, antihypertensive drug, side effect