



One-year Risk of Stroke after Transient Ischemic Attack or Minor Stroke

Geçici İskemik Atak veya Minör İnme Sonrası Bir Yıllık İnme Riski

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According to studies between 1997 and 2003, the risk of stroke or acute coronary syndrome after a “transient ischemic attack” (TIA) or minor stroke ranges between 12-20% (1,2). Currently, patients are triaged depending on stroke risk, which is calculated using age, blood pressure, clinical symptoms, duration of symptoms, and presence of diabetes (ABCD²). If ABCD² is equal to or higher than 4, emergency care is recommended for 24 hours starting from the beginning of the symptoms (3). Although important developments took place in the management of TIA after 2003, the prognosis of the disease and role of risk scoring systems in emergency care has not yet been clearly established. Therefore, the TIAregistry.org project was developed to define the current profile and etiologic factors, to determine short- (1 year) and long-term (5 years) outcomes, and to re-evaluate risk.

The “One-year risk of stroke after TIA or minor stroke” trial by Amarenco et al. (4) reported some of the data obtained by the TIAregistry.org project. This project was conducted in 61 centers in 21 countries and included patients who had TIA or minor stroke within 7 days of being examined by a stroke specialist. Between June 2009 and December 2011, 4789 patients were registered for

the study. Of these, 4583 were included in the analyses and 3593 (78.4%) were evaluated by a stroke specialist during the first 24 hours after the event. The mean age of the patients was 66.1±13.2 years and the median duration of hospital stay was 4 days. The mean ABCD² score for patients who were evaluated during the first 24 hours was 4.7±1.5, and for patients who were evaluated after the first 24 hours it was 3.8±1.6 (p<0.001).

This study found acute cerebral infarction in 33.4% of patients, at least one extracranial or intracranial stenosis in 50%, and atrial fibrillation in 10.4% of patients. A Kaplan-Meier estimate for 1-year composite cardiovascular outcomes was 6.2% (95% confidence interval 5.5-7.0). Kaplan-Meier estimates for stroke rates on the 2nd, 7th, 30th, 90th, and 365th days were 1.5%, 2.1%, 2.8%, 3.7%, and 5.1%, respectively. Multivariable analyses revealed that each of multiple infarctions, large artery atherosclerosis, or ABCD² score 6-7 increased stroke risk more than twice. Although the event rate was much lower than in historical cohorts, the ABCD² score was still effective for risk determination in patients who were treated urgently and intensively. In addition, 22% of recurrent strokes were seen in patients with ABCD² scores lower than 4 who had accompanying modifiable risk factors such as atrial fibrillation or 50% or more ipsilateral internal carotid artery stenosis.

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The results of the study showed that large artery atherosclerosis is associated with a higher risk than other etiologic stroke subtypes. In heart diseases such as atrial fibrillation, anticoagulants in addition to risk factor modification is very effective, and the remaining risk of stroke after such interventions is low. In patients with small vessel disease, decreasing blood pressure combined with risk factor management and antiplatelet treatment is very effective.

In conclusion, this study demonstrated that cardiovascular event risk after TIA was lower than previously reported. ABCD² score was still a reliable method for risk estimation. In addition to ABCD² score, presence of extensive small vessel disease and large artery atherosclerosis were detected to be other predictors for grading stroke risk within 1 year after TIA or minor stroke.

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