

Features of Patients with Transient Monocular Blindness: A Multicenter Retrospective Study in Japan

Koji Tanaka, MD,* Toshiyuki Uehara, MD,* Kazumi Kimura, MD,†
Yasushi Okada, MD,‡ Yasuhiro Hasegawa, MD,§ Norio Tanahashi, MD,||
Akifumi Suzuki, MD,¶ Shigeharu Takagi, MD,# Jyoji Nakagawara, MD,**
Kazumasa Arie, MD,†† Shinji Nagahiro, MD,‡‡ Kuniaki Ogasawara, MD,§§
Takehiko Nagao, MD,|||| Shinichiro Uchiyama, MD,|||| Masayasu Matsumoto, MD,¶¶
Koji Iihara, MD,## Kazunori Toyoda, MD,* and Kazuo Minematsu, MD,*
on behalf of the Japan TIA Research Group 2009-2011

Background: Transient monocular blindness (TMB) is associated with a transient ischemic attack (TIA). The purpose of this study was to investigate the features of TMB in the Japanese population using data from a multicenter retrospective study of TIA. *Methods:* The subjects were consecutive TIA patients admitted to 13 stroke centers within 7 days after symptom onset. We compared clinical characteristics of patients with TMB and those without TMB who had other symptoms of cerebral TIA. *Results:* A total of 464 patients were registered between January 2008 and December 2009, and 444 patients (283 men, mean age: 68.5 years) were included in the analysis. Thirteen patients (2.9%) presented with TMB. Patients with TMB were less likely to arrive at the specialized stroke center quickly than those without TMB ($P = .013$). Stenotic lesions in the extracranial internal carotid artery were more common in patients with TMB (33.3% versus 9.1%, $P = .022$). *Conclusions:* TMB was not common in our TIA inpatients. This study suggests that patients with TMB should immediately undergo a diagnostic workup, including brain and vessel imaging, and cardiac evaluation, as is performed in patients with other cerebral TIA symptoms. A larger, prospective cohort is needed to confirm the risks and outcomes of patients with TMB in the Japanese population. **Key Words:** Transient ischemic attack—amaurosis fugax—transient monocular blindness—atrial fibrillation—carotid artery disease—diffusion-weighted imaging.

© 2014 by National Stroke Association

From the *Department of Cerebrovascular Medicine, National Cerebral and Cardiovascular Center, Suita; †Department of Stroke Medicine, Kawasaki Medical School, Kurashiki; ‡Department of Cerebrovascular Medicine and Neurology, Clinical Research Institute, National Hospital Organization Kyushu Medical Center, Fukuoka; §Department of Neurology, Nagoya Daini Red Cross Hospital, Nagoya; ||Department of Neurology and Cerebrovascular Medicine, Saitama Medical University, Saitama International Medical Center, Hidaka; ¶Department of Stroke Science, Research Institute for Brain and Blood Vessels Akita, Akita; #Department of Neurology, Tokai University Hospital, Isehara; **Department of Neurosurgery, Nakamura Memorial Hospital, Sapporo; ††Department of Neurology, Ebara Hospital, Tokyo; ‡‡Department of Neurosurgery, Tokushima University Hospital, Tokushima; §§Department of Neurosurgery, Iwate Medical University Hospital, Morioka; ||||Department of Neurology, Tokyo Women's Medical University Hospital, Tokyo;

¶¶Department of Clinical Neuroscience and Therapeutics, Hiroshima University, Hiroshima; and ##Department of Neurosurgery, National Cerebral and Cardiovascular Center, Suita, Japan.

Received August 2, 2013; revision received September 10, 2013; accepted September 15, 2013.

Grant support: This study was supported in part by Grants-in-Aid (H20-Junkanki-Ippan-019 and H24-Junkanki-Ippan-011) from the Ministry of Health, Labour and Welfare of Japan (MHLW-Japan) and JSPS KAKENHI (grant number 24591309).

Address correspondence to Toshiyuki Uehara, MD, Department of Cerebrovascular Medicine, National Cerebral and Cardiovascular Center, 5-7-1 Fujishirodai, Suita, Osaka 565-8565, Japan. E-mail: tuehara@ncvc.go.jp.

1052-3057/\$ - see front matter

© 2014 by National Stroke Association

<http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2013.09.017>

Introduction

Amaurosis fugax, also known as transient monocular blindness (TMB),^{1,2} is a short-term visual loss in one eye, attributed to retinal ischemia or vascular insufficiency. TMB is commonly caused by ipsilateral carotid artery stenosis and is a well-known risk factor for early ischemic stroke or retinal ischemia in a transient ischemic attack (TIA). Although TMB is thought to be less frequent in the Japanese population than in Western populations,^{3,4} limited data exist regarding its frequency and clinical features. Therefore, in the present study, we aimed to clarify the frequency and clinical features of TMB using data from a multicenter retrospective study of TIA in Japan.

Materials and Methods

This study was a retrospective, observational, multicenter study, and the methods were described in detail elsewhere.⁵ In brief, we enrolled all consecutive patients with TIA admitted to 13 stroke centers in Japan within 7 days after symptom onset between January 2008 and December 2009. In accordance with the Classification of Cerebrovascular Diseases III from the National Institute of Neurological Disorders and Stroke,⁶ a diagnosis of TIA was made if focal neurologic symptoms with a vascular etiology lasted less than 24 hours, irrespective of the presence of ischemic insults observed on imaging. A diagnosis of TMB was made if patients had transient “visual loss in one eye” as the first symptom. An independent attending physician made the decisions regarding hospitalization and patient management. Each local ethics committee approved the retrospective collection and submission of patient’s clinical data to the study office in the National Cerebral and Cardiovascular Center.

The patients’ baseline characteristics, including sex, age, history of hypertension, diabetes mellitus, dyslipidemia, atrial fibrillation (AF), and premonitory antiplatelet and anticoagulation therapies, were collected from medical records. Data on ambulance use, clinical symptoms of TIA, and time from onset to hospital arrival were also obtained. Arrival time from onset was classified into 5 categories: less than 3 hours, 3–6 hours, 6–12 hours, 12–24 hours, or 24 hours or more. We examined clinical outcome, duration of hospitalization, and development of cerebral infarction or recurrence of TIA during hospitalization. For outcomes, we investigated TIA or TMB and cerebral infarction together as ischemic stroke.

Acute ischemic lesions were evaluated at admission by diffusion-weighted imaging (DWI) on a 1.5-T magnetic resonance imaging scanner. Hyperintense DWI lesions were defined as the presence of at least 1 lesion consistent with acute cerebral ischemia but not necessarily responsible for the TIA symptoms. Stenotic lesions in the extracranial internal carotid artery (ICA) were assessed by carotid duplex ultrasonography, computed tomographic

angiography, magnetic resonance angiography, or cerebral digital subtraction angiography. Significant stenotic lesions were defined as more than 50% stenosis observed using the North American Symptomatic Carotid Endarterectomy Trial method.^{7,8} When the degree of stenosis was estimated only by area reduction with carotid ultrasonography, more than 75% reduction in artery area was applied as a significant stenosis.

Subjects were stratified into patients with TMB (TMB group) and those without TMB who had other cerebral symptoms (non-TMB group). Patients with both TMB and other cerebral symptoms were classified into the TMB group. We compared baseline, clinical characteristics, and outcomes between the TMB group and the non-TMB group.

Statistical analysis was performed using JMP 7.0 statistical software (SAS Institute, Inc., Cary, NC). Results are expressed as mean \pm SD, unless otherwise specified. Differences in continuous variables between the TMB and the non-TMB groups were assessed using the Student *t* test or Mann–Whitney *U* test as applicable. Differences in categorical variables were assessed using the chi-square test and Fisher exact tests as appropriate. The category of time of arriving at stroke center was considered an ordinal variable, and Mann–Whitney *U* test were performed to identify the associations between the time of arrival and clinical features. *P* values less than .05 were considered significant.

Results

A total of 464 patients (292 men and 172 women; mean age: 69 years) were registered between January 2008 and December 2009. Of these, 20 were excluded because of incomplete data about time from onset to arrival at the stroke center. Thus, a total of 444 patients (283 men and 161 women; mean age: 68.5 ± 13.2 years) were included in the analysis. There were 13 patients (2.9%) in the TMB group.

Baseline and clinical characteristics of the TMB and non-TMB groups are shown in Table 1. There were no significant differences in sex, age, vascular risk factors, and premonitory antiplatelet or anticoagulation therapies between the groups. In the TMB group, no patient presented with unilateral weakness, and only 1 patient had dysarthria as a cerebral symptom. The frequency of ambulance use or transfer from medical practitioners was not different between the groups. Compared with patients in the non-TMB group, we found that patients with TMB were less likely to arrive at a stroke center quickly (*P* = .013).

No difference was observed between the TMB and non-TMB groups in the frequency of hyperintense DWI lesions (30.8% versus 21.0%, respectively; *P* = .488) and AF (23.1% versus 12.8%, respectively, *P* = .392). A total of 398 patients had imaging of the carotid arteries. Of these, 4 patients (33.3%) in the TMB group and 35 patients (9.1%) in the non-TMB group had stenotic lesions in the

Download English Version:

<https://daneshyari.com/en/article/2704174>

Download Persian Version:

<https://daneshyari.com/article/2704174>

[Daneshyari.com](https://daneshyari.com)