

## **Selected Topics: Neurological Emergencies**

### **RESULTS OF AN OUTPATIENT TRANSIENT ISCHEMIC ATTACK EVALUATION: A 90-DAY FOLLOW-UP STUDY**

Emmanuel Montassier, MD,\* Tao-Xiang Lim, MD,\* Nicolas Goffinet, MD,\* Benoît Guillon, MD,†  
Julien Segard, MD,\* Arnaud Martinage, MD,\* Gilles Potel, MD, PHD,\* and Philippe Le Conte, MD, PHD\*

\*Emergency Department, Hôtel Dieu Teaching Hospital, Nantes, France and †Neurology Department, Hôpital G. et R. Laennec,  
Saint Herblain, France

Reprint Address: Emmanuel Montassier, MD, Emergency Department, Hôtel Dieu Teaching Hospital, 1 place A. Ricordeau,  
Nantes 44000, France

**Abstract—Background:** Transient ischemic attack (TIA) is common and precedes 15% of strokes. TIA should be managed as a time-sensitive illness to prevent a subsequent stroke. However, management of TIA is heterogeneous, with little consensus about its optimal assessment. **Objective:** The objective of this study was to determine the outcome of patients with TIA evaluated in the Emergency Department (ED) and managed as outpatients within a 90-day period after discharge. **Methods:** All patients with symptoms of TIA admitted to the ED were eligible for inclusion. Patients were evaluated by an Emergency Physician who followed a decision algorithm used in the selection of patients for discharge. The main outcome variable was the occurrence of stroke during the 90 days after discharge from the ED. **Results:** During a 1-year period, a total of 118 patients were evaluated for TIA in the ED, representing 1.4% of ED medical admissions: 56 (47.5%) were hospitalized and 62 (52.5%) were discharged and enrolled in the outpatient TIA management. Two (3.2%) of the discharged patients could not be contacted for follow-up. Among the patients managed as outpatients, one (1.7%) presented with an ischemic stroke and 3 (5%) experienced a subsequent TIA within a period of 90 days after discharge from the ED. The rate of stroke predicted from the ABCD2 score was 9.7% at 90 days. **Conclusion:** The results of our study suggest that outpatient management of TIA, as described in our institution's guidelines, may be a safe and effective strategy, but further confirmatory studies should be performed. © 2013 Elsevier Inc.

**Keywords—transient ischemic attack; outpatient evaluation; Emergency Department; outcome; adverse event**

#### **INTRODUCTION**

##### *Background*

Transient ischemic attack (TIA), defined as a neurologic deficit caused by focal brain ischemia that completely resolves within 24 h, is common and precedes 15% of strokes (1). Previous studies show that after a TIA, the 90-day risk of stroke can be as high as 17.8%, with the highest frequency occurring within the first 2 days (2,3). Thus, TIAs should be managed as a time-sensitive illness to prevent a subsequent stroke.

##### *Importance*

Management of TIA in current practice is heterogeneous, with little consensus about its optimal assessment (4). Guidelines recommend that patients be evaluated within 1–2 weeks after a TIA, using different strategies, from emergency inpatient admission for rapid assessment to non-urgent outpatient evaluation (5–8). Furthermore, recommendations for admission of patients with TIA are unclear, and this results in increased health care costs. To improve management of TIA, we have established an

outpatient evaluation of patients with TIA at our institution.

### *Goal of This Investigation*

The objective of this study was to determine the outcome of patients with TIA who were evaluated in the Emergency Department (ED) and managed as outpatients within a 90-day period after discharge.

## METHODS

### *Study Design*

The study took place at the Teaching Hospital ED in the city of Nantes, France. The annual ED census is approximately 70,000 patients. Study subjects were enrolled from January 2009 to December 2009. The study was approved by Nantes Hospital's Ethics committee.

### *Study Setting and Population Setting*

Patients with symptoms of TIA who were admitted to the ED were eligible for inclusion. All patients were examined by an Emergency Physician without a neurologist. Upon arrival in the ED, the patients underwent a medical history-taking and a physical examination, blood tests (white blood cell count and platelet count, red blood cell count, glucose, ionogram, and creatinine), an electrocardiogram (ECG), and a non-contrast cranial computed tomography (CT) scan. The decision of whether to release the patient from the ED or to admit the patient was made by the Emergency Physician, based on a decision algorithm developed in our institution and detailed in [Figure 1](#). Using our local guidelines, after ED evaluation, patients with a total recovery from symptoms of TIA, a normal physical examination, normal blood test results, a cranial CT scan result negative for bleeding or other diagnoses, and an ECG negative for atrial fibrillation were enrolled in outpatient TIA management. Antiplatelet therapy was started in the ED before discharge. In the absence of contraindications, the patients received KARDEGIC<sup>®</sup> (Sanofi-Aventis, France) (acetylsalicylate de DL-lysine): 160 mg per day. The patients were then managed as outpatients, receiving extracranial Doppler testing of supra-aortic arteries and a vascular neurology consultation performed within the next 8–15 days.

### *Outcome Measures*

The main outcome variable was the occurrence of stroke during the 90 days after discharge from the ED. The secondary outcome measures were: 1) occurrence of TIA during the 90 days after discharge from the ED; 2) pres-

### 1) Evaluation in the ED

- Total recovery of symptoms of TIA:  YES  NO
- Normal physical examination:  YES  NO
- Normal blood tests results (white blood cells and platelet counts, red blood cells, glucose, ionogram and creatinine):  YES  NO
- ECG negative for atrial fibrillation:  YES  NO
- Cranial CT negative for bleeding or other diagnoses:  YES  NO

### 2) All boxes ticked YES: outpatient TIA evaluation

- Before discharge antiplatelet drugs started: KARDEGIC<sup>®</sup> (acetylsalicylate de DL-lysine) 160mg per day
- Outpatient management including:
  - o Extracranial Doppler testing of supra-aortic arteries
  - o Vascular neurologist consultation

### 3) One box ticked NO: Admission of the patient

**Figure 1. Decision algorithm for the management of patients admitted with transient ischemic attack (TIA) in the Emergency Department (ED). ECG = electrocardiogram; CT = computed tomography.**

ence of a symptomatic carotid stenosis >70%; 3) hospitalization for cardiovascular events; or 4) death during the 90 days after discharge from the ED. We also compared the risk of stroke at 90 days with the one expected using the ABCD2 score (Age, Blood pressure, Clinical features, Duration of symptoms and Diabetes), widely used to identify patients with transient ischemic attack who are at high risk for stroke.

Patients were contacted by telephone 90 days after their discharge. Medical records were reviewed for cases of occurrence of TIA or stroke during the follow-up period.

### *Data Analysis*

The data were entered into a custom database (Excel; Microsoft Corporation, Redmond, WA) and analyzed using Epi Info statistical package (Centers for Disease Control and Prevention, Atlanta, GA). Categorical data were reported as percentages and 95% confidence intervals (CI). Quantitative data were reported as means and standard deviations (SD).

## RESULTS

During a 1-year period, a total of 118 patients were evaluated for TIA in the ED, representing 1.4% of ED medical admissions. Of these 118 patients, 56 (47.5%) were hospitalized and 62 (52.5%) were discharged from the ED and enrolled in outpatient TIA management ([Table 1](#)). Two (3.2%) of the discharged patients could not be contacted for follow-up and were eliminated from the study.

Download English Version:

<https://daneshyari.com/en/article/6085628>

Download Persian Version:

<https://daneshyari.com/article/6085628>

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