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Introduction

A transient ischemic attack (TIA) is an acute episode of temporary neurological dysfunction that typically lasts less than an hour. It results from focal cerebral, spinal cord or retinal ischemia, and it is not associated with acute tissue infarction. After a TIA, the incidence of stroke is as high as 11% over the next 7 days and 24-29% over the following 5 years.

Together with the Emergency Department (ED), we have developed a TIA protocol with the following goals: standardization of TIA treatment, avoidance of hospitalization of low risk patients, prompt neurological and ultrasound evaluation of all patients.

Material and methods

In the ED:

- confirm that there is no residual neurological deficit (exclude stroke)
- perform:
 - ✓ blood tests: glucose, renal function, platelets, coagulation tests
 - ✓ electrocardiogram: exclude atrial fibrillation
 - ✓ brain CT
- start aspirin 300 mg (unless contraindicated)
- decide whether the TIA is at 'high' or 'low risk' stratifying the risk according to the ABCD2 score

If the ABCD2 score is ≥ 4 , the patient is <55 years old, no previously known atrial fibrillation is detected or the TIAs are in crescendo, the patient is admitted in the Neurological ward; usually hospitalization lasts less than 48 hours.

During hospitalization we will provide confirmation of diagnosis, and introduce early pharmacological management: start anticoagulant therapy in the case of cardioembolic TIA, otherwise Aspirin 300 mg + clopidogrel 300 mg as a single dose immediately, followed by aspirin 100 mg + clopidogrel 75 mg for 21 days, then aspirin 100 mg daily.

If LDL > 100 mg/dl start atorvastatin 80 mg and advice to the GP of periodic cpk and lipid profile monitoring.

In addition we assure monitoring for 48 hours of the following parameters: temperature blood pressure, heart rate and rhythm, respiratory rate and pattern, oxygen saturation.

Carotid doppler ultrasound is performed in all patients.

Diffusion-weighted magnetic resonance imaging (MRI) is performed in cases of diagnostic uncertainty.

Cardiological second level investigations (Holter ECG, echocardiogram) are performed in selected cases.

Assessment of risk factors, lifestyle and secondary prevention advice.

When the ABCD2 score is <4 , the patient is discharged, and neurological examination and carotid doppler ultrasound are performed within the next 48 hours. Meanwhile ASA 300 mg is given. Indication will be provided to reduce risk factors (control PA, loose weight, stop smoking, practise regular physical activity, control lipid profile).

The neurologist who visits the patient starts dual antiplatelet therapy for 21 days followed by monotherapy.

Conclusion

This protocol was applied in our hospital for one year; more than 30 patients with TIA were discharged from the ED and underwent neurological examination and carotid doppler ultrasound in the following two days; none of these patients had subsequent TIA or stroke in the following 7 days.

