

## **Netherlands Heart Foundation's public campaign on stroke: Recognise a stroke *be FAST***



**T**hrombolysis must be administered within three hours of an ischaemic stroke. In 2005 the Netherlands Heart Foundation will start the campaign 'Recognise a stroke *be FAST*' among the general public. The aim is to reduce delays when calling in medical assistance by patients or bystanders.

Just as with a cardiac infarction, the delay before starting treatment after a cerebral infarction or ischaemic stroke is directly associated with tissue loss. After a cardiac infarction, it is muscle tissue that is affected, and after a cerebral infarction, brain tissue.

The loss can be limited by dissolving the occluding clot through thrombolysis. This must be initiated as rapidly as possible after the first symptoms appear. The longer the occlusion lasts, the smaller the chance of a good recovery. After a cerebral infarction, the therapeutic time window for thrombolysis is limited to three hours. Thrombolysis has not been shown to be of use if the symptoms started more than three hours previously. Some patients with a cerebral infarction are not considered for thrombolysis. Either their infarction is mild or, in contrast, extremely severe, there was a cerebral haemorrhage instead of a cerebral infarction, or the infarction occurred while they were asleep and time of symptom onset is unknown.

Cerebral infarctions and cerebral haemorrhages are referred to under the general term strokes. They cannot be distinguished without a CT or MRI study. Of the patients diagnosed as having had a stroke, 80% have suffered a cerebral infarction and 20% a cerebral haemorrhage. Thrombolysis cannot be given before a CT or MRI study performed in the hospital has shown that

the patient does not have a cerebral haemorrhage. Therefore, it is not possible to do thrombolysis before or during transport to the hospital. As long as the three-hour limit is not exceeded, everyone with a stroke is a potential candidate for thrombolysis. In current practice, only a few patients are treated with thrombolysis. This percentage could be increased to 20 to 25%. If in the Netherlands everyone who is eligible for the treatment were to receive it, then the number of patients who could continue living independently after a stroke would increase by a thousand per year. A lot can be gained evidently.

### **Dealing with delays**

By dealing with delays, the number of patients who receive thrombolysis after a cerebral infarction could increase. Delays occur before the patient arrives in the hospital (onset-to-door time) or in the hospital (door-to-needle time). The onset-to-door time can be two hours at the most. Delays in the onset-to-door time can occur because the patient or the bystanders do not recognise the symptoms or because the patient is not able to call for help. Patients want to wait and see if the symptoms disappear by themselves, do not want to be admitted, or hesitate to call the family physician at night. It is also possible that the patient or the partner does not think the symptoms are severe enough to warrant attention. If the patient or bystanders do appreciate the seriousness of the situation, they have to know what steps to undertake and how. Delays can also occur at the family physician's office or in transport to the hospital. In hospital, the door-to-needle time should not be longer than one hour.

In the Netherlands, a great deal has happened in the past few years to accelerate the treatment after a stroke. Care-givers have been informed about the need to act quickly when someone has a stroke. Ambulance personnel have been trained. There are protocols, guidelines and transmural agreements made by the main care-givers. Now it is the public's turn. In the spring of 2005 the Netherlands Heart Foundation will start the campaign 'Recognise a stroke *be FAST*'. With television and radio spots, newspaper articles, flash cards, posters in family physician waiting rooms and pharmacies, this message will be communicated:

**Recognise:** Members of the public can recognise the basic stroke symptoms using the simple Face-Arm-Speech-Time test.

**Action:** Call the family physician or 112 immediately. Using the FAST test the family physician can decide to send the patient directly to hospital, thus saving time.

**Hurry:** Thrombolysis treatment can only be given within three hours after symptom onset. Speed is essential, every minute of delay leads to extra loss of brain tissue. ■

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