CORRESPONDENCE

Standardized Prehospital Treatment of Stroke

by Prof. Dr. med. Dr. h.c. Christof Kessler, Dr. med. Alexander V. Khaw, Prof. Dr. med. Darius G. Nabavi, Dr. med. Jörg Glahn, Prof. Dr. med. Martin Grond, Prof. Dr. med. Otto Busse in volume 36/2011

Competence Lies With the Emergency Physician

Emergency medical care should be included in the standard management in the prehospital phase of stroke. It is a distinct advantage if the dispatchers can optimally assess the urgency by means of standardized "filtering questions" (triage) and can then dispatch accordingly. The authors' recommendations in *Table 1* do not reflect the Notarztindikationskatalog (the catalogue of indications for emergency medical management) for Bavaria. In my opinion, distinctions such as those listed in *Table 1* are therefore obsolete, as they stipulate that the emergency physician should be alerted only if a patient is unconscious, and in all other cases the emergency ambulance team should decide on site about alerting the doctor. This would mean acting against the slogans "time is brain" and "competence is brain," since all therapeutic measures listed in *Table 3* constitute actions taken by physicians. Paramedics may just be able to meet the requirement for venous access in all patients with a suspected diagnosis of stroke (in accordance with the German Medical Association's statement relating to the emergency competence of paramedics and delegating medical services in the emergency medical services). However, administration of urapidil, for example, would not be covered by the emergency competence. Competence in the prehospital phase lies with the emergency physician for all measures listed by the authors—and this is not intended to diminish the professionalism of our emergency services. Paramedics cannot take a structured medical history with subsequent differential diagnostic evaluation. Even experienced emergency physicians are not able to predict the course during transport, especially if the cause of the symptoms is an intracerebral hemorrhage. Potential peracute deterioration of the patient's condition, including life threatening events, requires management by emergency physicians. And especially in rural areas, much valuable time would be lost if the emergency physician is called out afterwards.

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Conflict of interest statement
The author declares that no conflict of interest exists.

Economic Concerns

The article on prehospital management of stroke includes the sentence: "Patients with suspected acute stroke should be given the highest priority for transfer to a specialized stroke unit." The trend to admit all stroke patients to a stroke unit is questionable in terms of health economics; only 10% of stroke patients are suitable to receive thrombolysis. The admitting physician should differentiate and take heed of the contraindications (tumor patients, multimorbid patients from old people's homes, dementia patients, patients who have had their second or third stroke within a year), which can be treated far more efficiently and cost effectively in specialized geriatric wards, which provide the opportunity for early rehabilitation by means of physiotherapists, speech therapists, and occupational therapists. However, this would mean that emergency physicians and ambulance drivers should not be subjected to the rule that each patient with suspected stroke should be admitted to a stroke center.

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The author holds shares in Bayer, BASF, Merck, and Roche.

In Reply:

Both letters raise important problems regarding the standardized management of stroke patients in the prehospital phase.

R Sabinski comments that the questions in *Table 1*, which are intended to guide the staff at the medical emergency control center in the diagnosis of stroke, are not consistent with the catalogue of indications for emergency management for emergency physicians in Bavaria (1). This catalogue ticks off the findings of acute paralysis; impaired speech, vision, gait; and hemiparesis.. In our table we attempted greater precision; it is more comprehensive while remaining eminently practicable. For example, it prompts for two additional symptoms of a posterior circulation infarct (double vision, acute vertigo), and one of the lead symptoms of cerebral hemorrhage or subarachnoid hemorrhage (sudden acute onset of severe headache) is put within the immediate clinical context of stroke. Sabinski's comments regarding the use of an emergency ambulance team are based on a misunderstanding: in consensus with the German Federation of Emergency Medical Services (reg. assoc.), we used the term

"emergency medical service" in our article to refer to the totality of services provided by emergency physicians, dispatchers, and emergency ambulance. It is our understanding that the decision of whether an emergency physician is required should not be made on site by the paramedics, but by the authorized head of the emergency team. This approach has been decided explicitly in a joint session of the medical directors of several supraregional emergency medical services.

Dr Broicher criticizes our statement that patients with suspected acute stroke should be given the highest priority for transfer to a specialized stroke unit, although only 10% of patients would be eligible for thrombolysis. This gave cause for concern in terms of economicalness and raised the question of possible contra-indications that may render admissions to a stroke unit obsolete. Broicher is correct in that we did not actually recommend a blanket transfer of all stroke patients to a stroke unit we recommend the admission to a hospital with a stroke unit. In the emergency ambulance, the admitting physician has to decide on a case by case basis about the indication for thrombolysis and treatment in a stroke unit. We do not think that blanket recommendations on the basis of disease entities are the way forward in this setting.

Further, Broicher wrongly assumes that a stroke unit is merely a thrombolysis ward. The positive effects of stroke unit treatment are not, however, based only on initial thrombolysis treatment but rather on proper and competent multiprofessional treatment, in tandem with targeted diagnostic evaluation (2). We explained this in detail in our article. In contrast to Broicher's comments, patients with a stroke recurrence after a short time would be admitted into a stroke unit as a matter of high priority and urgency, in order to benefit from the great technical expertise.

To conclude, we thank our correspondents for their encouraging responses to our article.

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