



Systems for Stroke Patient Care: From Pre-Hospital Triage to ED Disposition

Edward P. Sloan, MD, MPH, FACEP
Professor, University of Illinois at Chicago, USA

Learning Objectives

- Discuss the modalities and systems of care that can be utilized in diagnosing and treating acute ischemic stroke patients.
- Evaluate the role of tertiary and stroke centers, prehospital triage, and ED patient transfer in the management of acute stroke patients.
- Determine what questions must be addressed by emergency physicians as they assess the optimal stroke patient treatment strategies in their individual hospital emergency departments.

Background

There continue to be new advances in both the diagnosis and treatment of patients with acute ischemic stroke. Although diagnostic modalities such as MRI, MRA, CTA, and cerebral angiography are readily available within many institutions, it remains unclear how the availability of these tests influences treatment decisions in ED stroke patients. It is also unclear how the availability of interventional radiological techniques for thrombolysis influence outcome such that they should be utilized preferentially to IV tPA.

The systems of stroke care include tertiary medical centers, primary and tertiary stroke centers, as well as protocols for triage and transfer to these specialized centers. As the number of designated stroke centers continues to increase, and as changes in EMS patient triage occur, Emergency Medicine physicians must have an understanding of what stroke care systems exist, in what ways these systems impart patient benefit, and how the use of these systems can be optimized in order to improve patient outcome and maximize resource use.

Dr. Sloan will discuss which technologies can be utilized in the diagnosis and management of acute stroke patients, and provide an update on stroke center designation, stroke patient prehospital triage, and inter-hospital transfer agreements. He will also discuss ways in which EM physicians can develop systems within their own institutions for enhancing stroke patient care.

Key Clinical Questions

What diagnostic and treatment modalities exist that can be utilized to optimally treat acute stroke patients?

What systems exist for stroke care, and what roles do prehospital triage and/or ED transfer to tertiary or stroke centers play when managing acute ischemic stroke patients in the ED?

What types of treatment protocols must be established by individual hospital Emergency Departments in order to optimize the use of the available systems for stroke care?