

The Role of Emergency Medicine in Neurologic Emergencies

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EMS / EM and Neuro-resuscitation

- 15 million ED visits / year for neurologic emergencies
- Potential disability is high
- Potential benefit to outcome is time dependent

- Great opportunity to become involved and establish a career pathway

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Getting Involved

- Clinical Policy Development
- The Brain Attack Coalition
- The Brain Trauma Foundation
- The NETT

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NINDS Trial

- Successful management of acute stroke depends on emergency medicine
 - Coordinate pre-hospital care
 - Coordinate ED care
- NINDS – SPOTRIAS
 - 10 Stroke Treatment Centers
 - Successful applicant for NINDS funding must have an emergency physician as a primary investigator

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Brain Attack Coalition: Promoting the EM / Neurology Interface



BAC Mission

- Formed in 1997
- A group of professional, voluntary and government groups
- Dedicated to reducing the occurrence, disabilities and death associated with stroke
- Goal is to strengthen the relationship between its member organizations and to provide a forum to discuss mechanisms for improving stroke outcomes

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BAC Members

- NINDS
- American Academy of Neurology
- American College of Emergency Physicians
- American Assn of Neurological Surgeons
- American Stroke Association
- National Stroke Association
- Am Soc of Intervent and Therap Neuroradiology
- American Society of Neuroradiology
- Congress of Neurological Surgeons
- Stroke Belt Consortium
- Veterans Administration
- National Association of EMS Physicians
- Centers for Disease Control and Prevention
- American Assn of Neuroscience Nurses

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JCAHO Disease Specific Care Certification

- Joint initiative between ASA and JCAHO
- Voluntary participation
 - Approx 400 accredited hospitals
- Premise is that accreditation process will drive quality measures and improve outcomes
- No emergency medicine society has endorsed this initiative
 - t-PA controversy
 - Overcrowding
 - Medical legal implications

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EM Position Statements

- Emergency physicians were concerned of being isolated care providers in acute stroke with the inherent liability
- The EM community was skeptical of the NINDS trial's external validity
- The EM community was not convinced that the risk/benefit of t-PA merits its use in all settings

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What are the questions to be answered in the new ACEP stroke patient clinical policy?

- When the NINDS criteria are met, is IV t-PA safe and effective for acute ischemic stroke presenting within 3 hours of symptom onset?
- Is there a subset of patients presenting with a TIA that can be effectively and safely managed as outpatients?

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What are the questions to be answered in the new ACEP stroke patient clinical policy?

- Initiative started with AAN in 2005
- Three ACEP members, 3 AAN members
- Evidence based methodology
- Initial MEDLINE search had over 3000 citations
- Approx 200 abstracts reviewed
- Approx 60 articles being graded

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Neurological Emergencies Treatment Trials Network

- Background: Neurologists and / or neurosurgeons are not present when many neurologic emergencies present
- Concept: A neurologic emergencies network that is not disease specific but would open opportunities for clinical research on neurologic emergencies in the prehospital and ED arenas
- A network would allow for pooling of resources

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The Hub and Spoke Model

- Clinical Coordinating Center – provides executive and steering committee governance, and management services to research centers. Facilitates rapid and rigorous completion of trials
- Hub – (10 – 20 per CCC) backbone of the network; regional and provide research and clinical infrastructure for collaborating centers (spokes)
- Spoke – (2 – 10 per hub) smaller centers which either provide on site research or refer to a hub

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NETT Research Agenda

- High prevalence neurologic diagnoses
 - Stroke / SAH
 - Seizures
 - TBI
- Low prevalence but high morbidity and high mortality neurologic diagnoses
 - Spinal cord injury
 - Meningitis

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Summary

- EMS and Emergency Medicine are on the front line for diagnosing and managing neurologic emergencies
- Outcomes in these patients are dependent on the quality of the initial resuscitative care provided
- We are entering a new era in research that will benefit our specialty
- There is a great need from our specialty to take a leadership role in clinical care, research, and education in neurologic emergencies

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Questions?

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