Using a Case-based Approach to Defining a Complex Stroke Patient

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Abstract

With the designation of Comprehensive Stroke Centers there is emphasis on patients being triaged to the appropriate level of care. As stroke treatment time is sensitive, it is imperative for comprehensive stroke centers to partner with regional resources to expedite patient care. Understanding the treatment capabilities of area stroke centers enables providers to make informed decisions.

What sets comprehensive stroke centers apart is the breadth of experience and treatments available to patients. One way to differentiate between primary and comprehensive stroke center is through a case-based approach. This presentation will demonstrate a variety of interventions for acute stroke as well as highlight the speed which the complexity of care changes, necessitating alternative treatment plans.

Specific discussion points include young stroke patients, changes, necessitating alternative treatment plans.

Objectives

- List 2 treatments used to prevent cerebral edema in acute stroke management
- Discuss the role of nursing assessment to decrease complications associated with aggressive therapy
- List 2 treatments used to reduce intracranial pressure

Complex Case #1

Bilateral Strokes During the Same Admission

Case Presentation

- 69 yo male presents to ED after developing right facial droop and global aphasia, NIHSS 7.
- New diagnosis of Afib with rapid ventricular response. Started on diltiazem and phenylephrine.
- No hypodensity on CT or large vessel occlusion on CTA.
- Admitted to Neuroscience ICU for monitoring. Stable for 34.5 hours.

What’s Different About This Case?

- At change of shift, patient returned to Afib with rapid ventricular response
- Change in patient presentation: prior aphasic with left sided weakness, NIHSS 4 was now 25.
- Repeat CT, consistent with new right MCA stroke. To IR for advanced endovascular intervention
- Astute neurovascular assessment connected change in exam and rhythm change. Expedited work-up and treatment through activation of in-patient stroke alert.

Complex Case #2

Multiple Strokes and Transition in Goals of Care

Case Presentation

- 66 yo male, wake-up stroke. NIHSS 4. Diagnosed with right MCA stroke.
- Admitted to ICU for neuro monitoring and cerebral edema management. 18 hours later the patient had a change in neuro exam (NIHSS 4 to 25) with cerebral edema and hemorrhagic conversion necessitating hemicraniectomy and placement of external ventricular device.
- 12 day ICU stay. Exam on discharge to rehab: left sided weakness, arm weakness, right sided neglect, NIHSS 15.
- Three weeks after discharge patient visited NSICU ambulating independently with cane-almost complete recovery.

Second Stroke

- The second event - 1 month after discharge patient presented to ED with new onset seizure-like activity, intubated for airway protection. Now with right sided weakness, NIHSS 17. Imaging demonstrated new left MCA stroke.
- Neurosurgery consulted but due to size of dominant hemisphere stroke, recent contralateral stroke, and history of smoking and alcohol use, decision was made to withdraw aggressive measures and make patient comfort muscle.
- Compassionate and expert care by the same nursing staff that rallied around the patient and family with his first stay provided comfort and guidance during this difficult period of diagnosis and change in goals of care.

References:


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