Dartmouth-Hitchcock Medical Center

Practice Guidelines are intended to assist physicians and other health care providers in clinical decision-making by describing generally acceptable approaches for the diagnosis, management, or prevention of specific diseases or conditions. These guidelines should not be considered inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the same results. Final judgement regarding the care of an individual patient must be made by each physician.

Clinical Practice Guideline

Guideline for the Management of Adult Patients with Spontaneous Acute Intracerebral Hemorrhage

Stroke Collaborative Practice Team Members:
Linda Arsenault, M.S., R.N.
Nancy Bagley, M.D.
Robin Clark, A.R.N.P.
Donna Crowley, M.S., R.N.
Kadir Erkmen, M.D.
Clifford Eskey, M.D., PhD.
Judy Graham, R.N.
Jason Johns, R.N.
Donald S. Likosky, PhD
Timothy G. Lukovits, M.D.
Scott Rodi, M.D.
Jane Stephenson, M.S.W.
Cynthia Tebbetts, R.N.
Connie Thompson, R.N.
Mary S. Turner, MS, CCC-SLP

Also reviewed and endorsed by:
Section of Neurology
Section of Neurosurgery
Pharmacy P and T Committee

Introduction

The evaluation and treatment of the patient experiencing an acute intracerebral hemorrhage (ICH) is a complex and rigorous process. This process requires coordinated and collaborative, multidisciplinary management that optimally begins with proper triage, characterization of the pathophysiology and etiology of symptoms, and concludes with the initiation of rehabilitation and secondary prevention. The following clinical practice guideline was developed by a task force at Dartmouth-Hitchcock Medical Center charged with improving the care of stroke patients. It is primarily based upon the American Heart Association's recently released update "Guidelines for the management of spontaneous intracerebral hemorrhage in adults: 2007 update". [1] Recommendations related to the initial bed placement for patients at DHMC are discussed below; more detailed recommendations are supported by the enclosed reference and accompanying order set.

Decision to Admit

It is recommended that all patients with the diagnosis of ICH be admitted under the inpatient designation to a dedicated stroke unit or a critical care unit. At Dartmouth-Hitchcock Medical Center, 5 West is organized as a dedicated stroke unit.

Admission to the NSCU

Admission to the Neuro Special Care Unit instead of a regular bed on 5 West is recommended for ICH patients with the following characteristics:

- Recent hemorrhage within 48 hours
- Severe behavioral deficits (e.g., aphasia, disorientation or agitation requiring continuous observation)
- Unstable neurologic signs/symptoms (e.g., deteriorating course)
- Significantly impaired level of consciousness (e.g., requires more than minor stimulation to respond or National Institutes of Health Stroke Scale (NIHSS) item 1a. score equals 2 or 3)
- Recent cardiac arrhythmia requiring cardiac monitoring but without hemodynamic instability. (Patients assessed to be at high risk of developing a life-threatening tachyarrhythmia or bradycardia are usually managed in the ICU).
- Hypertension requiring frequent doses of intravenous antihypertensive medication

Admission to the ICU

Admission to the Intensive Care Unit is recommended for ICH patients with the following characteristics:

- Intubated or mechanically ventilated or at high risk of developing airway compromise or hypoventilation in the near future
- Severe hypertension or hypotension requiring the use of an arterial line or continuous intravenous infusions of antihypertensive (except Nicardipine) or pressor medications
- Patients thought to be at high risk of developing a life-threatening tachyarrhythmia or bradycardia
- Severe medical comorbidity (sepsis, recent cardiac ischemia)
- Patients requiring measurement of intracranial pressure (ICP)

Inpatient Treatment Goals

Inpatient treatment goals are:

1. To determine the etiology of the ICH, treat the acute consequences of stroke and to initiate an appropriate treatment plan aimed at preventing recurrent ICH.
2. To determine the patient's clinical deficit and care needs and to establish a plan for rehabilitation.
3. To prevent and/or treat the subacute complications of stroke including deep venous thrombosis, aspiration, and urinary tract infection.
4. To educate the patient and caregivers.

References

1. Joseph Broderick, Sander Connolly, Edward Feldmann, et al. Guidelines for the management of spontaneous intracerebral hemorrhage in adults: 2007 update. Stroke 2007; 38:2001-2023.