## American Stroke Association

## http://www.strokeassociation.org

In 2012, the American Heart Association and the American Stroke Association published updated evidence-based guidelines on the comprehensive management of aneurysmal subarachnoid hemorrhage (aSAH), including the management of cerebral vasospasm and delayed cerebral ischemia (DCI).

The American Heart Association has played a leadership role in the periodic assimilation and publication of high-quality multidisciplinary stroke-related guidelines. The spontaneous intracranial hemorrhage (ICH) guidelines were last published in 2010<sup>1)</sup>.

In February 2014, the American Heart Association/American Stroke Association released their first guideline focused on stroke prevention in women. This new guideline highlights unique risk factors for stroke in women, including oral contraception and hormone therapy, and pregnancy-associated disorders, such as preeclampsia, that may have long-lasting consequences on a woman's health. It also addresses hypertension; atrial fibrillation; migraine headache with aura; and the epidemiology of types of stroke, such as aneurysmal subarachnoid hemorrhage and cerebral vein thrombosis, that are predominant in women.

Members of a multidisciplinary expert panel searched, reviewed, and critiqued relevant Englishlanguage literature published between 1990 and May 2013. The panel devised evidence tables and developed recommendations using American Heart Association guideline procedures and levels of evidence.

This synopsis of the guideline summarizes the evidence about risk factors for stroke in women and suggests prevention strategies. It also describes the new recommendations relevant to identifying and treating hypertensive disorders in pregnancy that increase risk for stroke <sup>2</sup>.

Cerebellar stroke causes major morbidity in the aging population. Guidelines from the American Stroke Association recommend emergent decompression in patients who have brainstem compression, hydrocephalus, or clinical deterioration. The objective of this study was to determine 30day and 1-year mortality rates in patients >60 years old undergoing emergent posterior fossa decompression.

METHODS: Surgical records identified all patients >60 years old who underwent emergent posterior fossa decompression. Mortality rates were calculated at 30 days and 1 year postoperatively, and these rates were compared with patient and procedure characteristics.

RESULTS: During 2000-2014, 34 emergent posterior fossa decompressions were performed in patients >60 years old. Mortality rates at 30 days were 0%, 33%, and 25% for age deciles 60-69 years, 70-79 years, and ≥80 years. Increasing age (alive at 30 days 75.2 years  $\pm$  1.7 vs. deceased 81.1 years  $\pm$  1.7, P = 0.01) and smaller craniectomy dimensions were associated with 30-day mortality. Mortality rates at 1 year were 0%, 50%, and 67% for age deciles 60-69 years, 70-79 years, and ≥80 years. Increasing age was significantly associated with mortality at 1 year (alive at 1 year 72.3 years  $\pm$  2.0 vs. deceased 81.1 years  $\pm$  1.2, P < 0.01). Type of pathology, side of pathology, volume of bleed/infarct, and placement of an external ventricular drain were not associated with

mortality. Age was independent of admission Glasgow Coma Scale score as a predictor of mortality at 30 days, 90 days, and 1 year postoperatively.

CONCLUSIONS: Increasing age and smaller craniectomy size were significantly associated with mortality in patients undergoing emergent posterior fossa decompression. Among patients  $\geq$ 80 years old, one-quarter were dead within 1 month of the operation, and more than two-thirds were dead within 1 year <sup>3)</sup>.

1)

Morgenstern LB, Hemphill JC III, Anderson C, et al.. Guidelines for the management of spontaneous intracerebral hemorrhage: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke. 2010;41(9):2108–2129.

2)

Bushnell C, McCullough L. Stroke prevention in women: synopsis of the 2014 American Heart Association/American Stroke Association guideline. Ann Intern Med. 2014 Jun 17;160(12):853-7. doi: 10.7326/M14-0762. PubMed PMID: 24935489; PubMed Central PMCID: PMC4255708.

Puffer RC, Graffeo C, Rabinstein A, Van Gompel JJ. Mortality Rates After Emergent Posterior Fossa Decompression for Ischemic or Hemorrhagic Stroke in Older Patients. World Neurosurg. 2016 Aug;92:166-70. doi: 10.1016/j.wneu.2016.05.003. Epub 2016 May 10. PubMed PMID: 27178232.

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