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KEY ADVANCES
CLINICAL POLICY ALERT

Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Acute Headache

Reconfirmed May 2024

American College of Emergency Physicians Clinical Policies Subcommittee (Writing Committee) on Acute Headache: Godwin SA, Cherkas DS, Panagos PD, Shih RD, Byyny R, Wolf SJ. Ann Emerg Med. 2019 Oct;74(4):e41-e74. doi:10.1016/j.annemergmed.2019.07.009. PMID: 31543134 (1)

Policy Recommendations and Focus Points in bold

1. In the adult emergency department (ED) patient presenting with acute nontraumatic headache, are there risk-stratification strategies that reliably identify the need for emergent neuroimaging?

   Patient Management Recommendations:

   Level A recommendations (none specified)
   Level B recommendations (see below)
   Use the Ottawa Subarachnoid Hemorrhage Rule (age ≥ 40 years, neck pain or stiffness, witnessed loss of consciousness, onset with exertion, thunderclap headache, and limited neck flexion on examination) as a decision rule that has high sensitivity to rule out subarachnoid hemorrhage (SAH), but low specificity to rule in SAH, for patients presenting to the ED with a normal neurologic examination and peak headache severity within 1 hour of onset of pain symptoms. (2) The presence of any one criteria requires emergent neuroimaging. Although the presence of neck pain and stiffness on physical examination in ED patients with an acute headache is strongly associated with SAH, do not use a single physical sign or symptom to rule out SAH.
   Level C recommendations (none specified)

2. In the adult ED patient treated for acute primary headache, are nonopioids preferred to opioid medications?

   Patient Management Recommendations:

   Level A recommendations (see below)
   Preferentially use nonopioid medications in the treatment of acute primary headaches in ED patients.
   Level B recommendations (none specified)
   Level C recommendations (none specified)

3. In the adult ED patient presenting with acute nontraumatic headache, does a normal noncontrast head computed tomography (CT) scan performed within 6 hours of headache onset preclude the need for further diagnostic workup for SAH, including a lumbar puncture?

   Patient Management Recommendations:

   Level A recommendations (none specified)
   Level B recommendations (see below)
   A normal noncontrast head CT (minimum third-generation scanner) performed within 6 hours of symptom onset in an ED patient with headache and a normal neurologic examination may be used to rule out nontraumatic SAH.
   Level C recommendations (none specified)

4. In the adult ED patient who is still considered to be at risk for SAH after a negative noncontrast head CT, is CT angiography of the head as effective as lumbar puncture to safely rule out SAH?

   Patient Management Recommendations:

   Level A recommendations (none specified)
   Level B recommendations (none specified)
   Level C recommendations (see below)
   Perform lumbar puncture or CT angiography to safely rule out SAH in the adult ED patient who is still considered to be at risk for SAH after a negative noncontrast head CT result.

References:

1. American College of Emergency Physicians Clinical Policies Subcommittee (Writing Committee) on Acute Headache; Godwin SA, Cherkas DS, Panagos PD, Shih RD, Byyny R, Wolf SJ. Ann Emerg Med. 2019 Oct;74(4):e41-e74. doi:10.1016/j.annemergmed.2019.07.009. PMID: 31543134
   https://www.acep.org/patient-care/clinical-policies/headache/

2. https://emottawablog.com/2017/11/validation-ottawa-sah-rule/

Disclaimer
ACEP's clinical policies are developed by the Clinical Policies Committee, guided by processes in accordance with national guideline-development standards. The policies are approved by the ACEP Board of Directors to provide guidance on the clinical management of emergency department patients. These ACEP Board-approved documents describe ACEP's policies on the clinical management of emergency department patients. These clinical policies are not intended to represent a legal standard of care for emergency physicians. ACEP recognizes the importance of the individual physician's judgment and patient preferences.

Clinical findings and strength of recommendations regarding patient management were made according to the following criteria:

Level A recommendations

Generally accepted principles for patient care that reflect a high degree of clinical certainty (e.g., based on evidence from one or more Class of Evidence I or multiple Class of Evidence II studies).

Level B recommendations

Recommendations for patient care that may identify a particular strategy or range of strategies that reflect moderate clinical certainty (e.g., based on evidence from one or more Class of Evidence II studies or strong consensus of Class of Evidence III studies).

Level C recommendations

Recommendations for patient care that are based on evidence from Class of Evidence III studies or, in the absence of adequate published literature, based on expert consensus. In instances in which consensus recommendations are made, "consensus" is placed in parentheses at the end of the recommendation.

Resources for additional learning:

https://pubmed.ncbi.nlm.nih.gov/?term=emergency+department+acute+headache

https://rebelem.com/sensitivity-of-early-brain-ct-to-exclude-aneurysmal-subarachnoid-hemorrhage/

http://www.emdocs.net/?s=headache

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