



EMC 370 Introduction to Medical Emergencies

31 Headache

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Objectives

At the completion of this lecture the learner will be able to discuss:

- Common and Uncommon ED/911 HAs
- Potentially life threatening HAs
 - meningitis
- Unusual HAs
 - metabolic
- Headache assessment and stabilization



Acute Headache

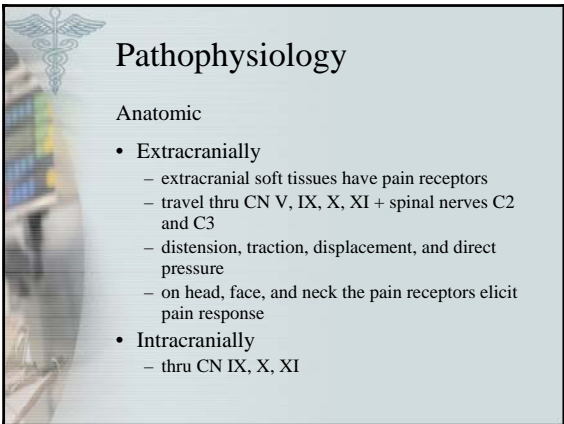
- Frequency
 - Common ED
 - Uncommon 911
 - “stroke”
- Potentially life threatening
- Approach
 - stabilization, then
 - careful history + PE



Acute Headache

Pathophysiology

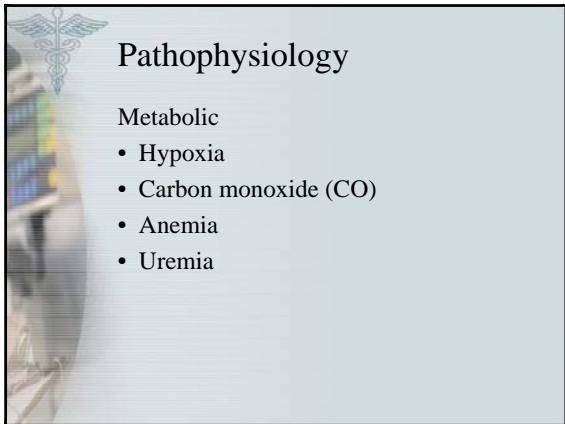
- Mechanisms
 - limited possibilities
 - extracranial
 - intracranial
 - chemical



Pathophysiology

Anatomic


- Extracranially
 - extracranial soft tissues have pain receptors
 - travel thru CN V, IX, X, XI + spinal nerves C2 and C3
 - distension, traction, displacement, and direct pressure
 - on head, face, and neck the pain receptors elicit pain response
- Intracranially
 - thru CN IX, X, XI



Pathophysiology

Metabolic

- Hypoxia
- Carbon monoxide (CO)
- Anemia
- Uremia



Common Causes


Common causes for patients with headache to be seen in the ED or by paramedics.

- Migraine
- Tension
- Cluster
- ↑BP
- Sinusitis




Potentially Life Threatening

- SAH
- CVA (stroke)
- Meningitis
- Hypersensitive encephalopathy



Critical Questions / Hx + PE


- Has there been trauma?
- Has there been seizure?
- Has there been fever?
- Meningitis?
- Are there any focal or neurological deficits?
- Stroke?
- Is there hypertension?
- Is mental status normal?
- Is there temporal arteritis?



Initial HA Management

1° / CO₂M₃BIG +VS

- Note
 - F
 - BP
 - HR (↓ with ↑ICP)
 - RR (may be ↓ICP)
- Observe for seizures / coma / shock
 - Treat for seizures,...




Headache history

Onset

- Sudden = danger sign (SAH)


Severity

- More intense than pt. has ever known = danger sign (SAH)
- Fever ± neck pain (meningitis)
- Hx of confusion, focal defect, seizure = danger (intracranial, stroke, meningitis)
- Photophobia = migraine / meningitis




Headache History

- Location (often misleading)
 - Unilateral – migraine
 - Nuchal – SAH, meningitis




Headache: Physical Exam

- VS BP
 - mild elevation 2° to pain
- Skin
 - rash (meningitis)
- HEENT
 - feel temporal artery; sinus tenderness
 - fundi



Headache: Physical Exam

- Neck
 - nuchal rigidity
 - muscle tension ; trismus (lockjaw)
 - does straightening a bent **k**nee cause pain (**K**ernig's)
 - do leg(s) raise upon **b**ending the neck flexion? (**B**rudzinski's)



Summary

We have discussed:

- The pathophysiology involved with the acute headache.
- Common reasons that patients seek evaluation for headache.
- Potentially lethal causes of headache.
- Initial treatments for patients presenting with headache.