Patient with Undifferentiated Headache
(Choose Appropriate Pathway)

**NEW / HIGH RISK**
- New/sudden onset
- Visual loss with headache
- Worst headache of life
- Chronic headache with new features
- Abnormal neuro exam
- Occipital/nuchal pain
- Immunocompromised
- Age greater than 50 years

**PHYSICAL EXAM TIPS**
- **HEENT:** Assess fundi (elevated ICP), pupils, sinuses, scalp tenderness/temporal artery tenderness
- **Neck:** Assess for meningismus, bruits
- **Neuro:** Perform thorough exam, including mental status, CN, motor/strength, sensory cerebellar

**CHRONIC / LOW RISK**
- No High Risk Criteria
- Gradual onset
- Consistent with previous headache

**POUNDing criteria:**
(Used to identify migraine headache)
- Pounding
- Duration 4-72 hours
- Unilateral
- Nausea
- Disabling

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**Indications for Labs**
- **Suspected CVA/ICH:** Obtain bedside glucose, CBC, INR
- **Immunocompromised**
- **Signs/sx of systemic infection:** myalgia, fever, malaise, weight loss, etc.
- **Suspected temporal arteritis:** (pt older than 50 with scalp tenderness, jaw claudication, +/- visual loss), obtain ESR/CRP
- **Anticoagulated:** warfarin use, liver disease, clotting disorders, etc: obtain CBE, PT/INR, PTT
- **Workup of secondary cause of headache**

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**Indications for LP**
- **SAH Workup:** Sudden onset, worst HA of life, family history of aneurysm
- **Meningitis Workup:** Febrile, meningismus/neck stiffness
- **Immunocompromised:** HIV/AIDS patients, known HIV risk factors, undergoing chemo/radiation, etc.

**Neuroimaging before LP:**
- Recommended for patients with signs of elevated ICP (altered mental status, focal neurologic deficits, signs of meningeal irritation, papilledema, absent venous pulsations on fundoscopic exam)
- LP prior to neuroimaging may be considered in adult patient without signs of elevated ICP

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Follow Undifferentiated / Primary Headache Pathway

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Follow Non-migraine Primary Headache Pathway
Patient with Undifferentiated Primary Headache  
(Choose Appropriate Pathway)

**MIGRAINE-TYPE (POUND)**  
- History of migraine and consistent with previous headache

**NONMIGRAINE**  
- No typical migraine features
- No High-risk criteria

**FIRST LINE MEDICATIONS**
1) IV Fluids  
2) Prochlorperazine 10 mg IV/IM  
   OR  
   Droperidol 2.5 mg IM/IV (EKG 1st)  
   OR  
   Metoclopramide 20 mg IV/IM (pregnancy)  
   PLUS  
3) Diphenhydramine 25 mg IV/IM  
   AND  
4) Ketorolac 30 mg IV  
   - OK in 1st/2nd trimester pregnancy  
   - Patients with renal dysfunction and/or people over the age of 65: dosage is 15 mg IV  
5) CONSIDER Dexamethasone 10 mg IV for patients with headache lasting longer than 72 hours or history of severe recurrent migraine

**SECOND LINE MEDICATIONS**
1) Antiemetic of choice  
2) *Sumatriptan 4-6 mg SQ if not given initially  
3) Opioids IV/PO at MD discretion

**Consider neuroimaging +/- LP  
Consult appropriate service  
Admit for pain control / further workup**

Headache relieved?
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Yes
Ensure appropriate outpatient follow-up  
+/- Rx Fioricet / NSAIDS

No

Headache relieved?
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Yes

No

*Consider as first line treatment if patient has not taken DHE/triptans in last 24 hours, has used triptans in past with good response and has no contraindications (CAD, CVA, Reynaud’s, pregnancy, etc.*
<table>
<thead>
<tr>
<th>ACEP Headache Categories</th>
<th>SAH/ICH, CVA, meningitis, encephalitis, brain tumor with elevated ICP, temporal arteritis, dural sinus thrombosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Critical secondary causes requiring emergent diagnosis and treatment</td>
<td>Brain tumor with no signs of elevated ICP, aneurysm or AVM without ICH</td>
</tr>
<tr>
<td>II. Critical secondary causes not requiring emergent treatment but urgent follow-up/admission</td>
<td>HTN, sinusitis, post-LP headache</td>
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<tr>
<td>III. Benign/reversible secondary causes</td>
<td>Migraine, tension, cluster</td>
</tr>
<tr>
<td>IV. Primary causes of headache</td>
<td></td>
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</tbody>
</table>


2) Detsky ME, McDonald DR, Baerlocher MO, et al. Does this patient with headache have a migraine or need neuroimaging? JAMA 2006;296(10):1274–83


