

# Headache

## 1-introduction:

-most prevalent medical problem worldwide, 50-75% of adults experienced, 3<sup>rd</sup> cause of disability and lost productivity, MC cause to visit physicians.

-categories: 1-**primary** headache (not due to another medical condition) 2-**secondary** headache (underlying cause)

-pain originates from involving pain-sensitive structures in the head e.g. cranial nerves/roots, blood vessels

-headache can be multifactorial, refractory to treatment

## 2-diagnosis:

-clinical diagnosis: Hx and Phx, there are no biomarkers for primary headache, patient may bring pictures with paroxysmal symptoms and signs (ptosis and lacrimation) which can add in diagnosis

### 1-history:

Key points from the history	Additional aspects of the history important in evaluating a patient with headache are:
When obtaining the history the following information must be elicited:	
- Onset	- Analgesic use
- Precipitants and triggers	- Caffeine use
- Duration	- Medical history
- Location (unilateral or bilateral; frontal, lateral, vertex, or occipital)	- Current or recent pregnancy
- Quality and severity	- Medications (including asking specifically about contraceptive use, over-the-counter treatments, and supplements)
- Frequency	- Social history, including detailed screening for illicit drugs
- Alleviating and exacerbating factors	- Family history
- Positional influences (better or worse when supine)	- Sleep, including a history of insomnia and snoring, symptoms suggestive of obstructive sleep apnea
- Waking the patient from sleep, or occurring upon awakening	
- Associated with menses	
- Associated symptoms	

-the semiology helps to differentiate primary from secondary headache

**-red flags that suggest secondary headache:**

1-**acute** onset or **progressive worsening** from baseline, **new or different** headache

2-**smoking**

3-**age>50**, or **no prior** headache history

4-**systemic symptoms**: fever, weight loss

5-**risk factors**: pregnancy, hypercoagulability, malignancy, immunosuppression, IV illicit substance use

6-**increase ICP**: **waking** from sleep, worsening with **Valsalva maneuver**, worsening with **supination**

7-focal features: seizures, mental status abnormalities, cranial nerve deficit, weakness, sensory changes

8-precipitants: trauma, newly prescribed medications, infection

### 2-physical examination:

-full **neurological exam** + **fundoscopic exam**(papilledema) + **cortical sensory** exam (cortical dysfunction occurs with venous sinus thrombosis) + exam for **focal neurological deficit** (including field cuts, cranial nerve palsies, weakness, sensory symptoms (suggest 2 headaches)+ **CVS exam** to evaluate arrhythmias and carotid stenosis

## primary headache:

-**normal** general and neurological examination (**autonomic cephalalgias** may present with specific signs suggesting that disorder)

-finding in chronic headache: temporomandibular joint (TMJ) tenderness, dental wearing, pain of cervical muscles, suggesting comorbid conditions like cervicalgia

## Secondary headache:

-assessed by **general** and **neurological** examination

-**CVS exam** to evaluate arrhythmias and carotid stenosis (cause 2 headache)

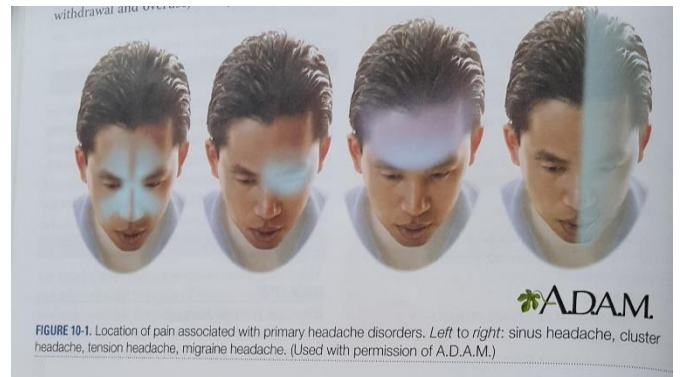
-it's important to pay attention to: 1-**hypertension** (cause 2 headaches) 2-**fever** (suggests underlying infection like CNS infection)

-**head and neck exam include:**(Evaluating nuchal rigidity, cervical myofascial pain, occipital tinsel sign, plate the TMJ , asses dental wearing or chipping, observe the oropharynx for signs of narrowing (suggest OSA))

## Primary headache disorder:

	Episodic Migraine	Episodic Tension	Episodic Cluster	Paroxysmal Hemicrania	SUNCT and SUNA
Sex	Female > male	Female > male	Male > female	Female > male	Male > female
Location	Unilateral > bilateral	Bilateral (band around the head)	Unilateral (behind or around the eye)	Unilateral (behind or around the eye)	Unilateral (behind or around the eye)
Quality	Throbbing, pulsatile	Dull pressure or tightening (vice-like)	Stabbing, burning, boring	Stabbing, burning, throbbing	Stabbing, burning
Severity	Moderate to severe	Moderate	Severe	Severe	Severe
Attack duration	4–72 h	30 min–7 d	15–180 min	2–30 min	1 s–10 min
Attack frequency	Variable	Variable	From 1 every other day to 8/d	>5/d to 40/d	From 1/d to 200/d
Autonomic features	No	No	Yes	Yes	Yes

SUNCT, short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing; SUNA, short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms.



## 1-Migraine:

-**most** prevalent primary headache

-develop mostly in **adolescence** and **early adulthood** (can be episodic or chronic),2F:M

-**Triggers:**(whether changes, menses, caffeine (withdrawal and overuse), alcohol (red wine), soft cheeses, nitrite-heavy food (processed meats))

\*migraine attacks can also occur without identifiable triggers

-**Diagnosis:** after at least **5 attacks** + the **following characteristics:**

1-The headache **lasts 4to72 h** if untreated

2-at least 2: (**throbbing, unilateral, worsening with activity (waking), moderate to severe pain**)

3-at least 1: ((**nausea, vomiting or both**), (**phonophobia and photophobia**))

Classification:

**A-migraine without aura:**

- may start in **childhood** and manifest occasionally with abdominal symptoms (**abdominal migraine**)
- risk factor: **motion sickness** at childhood

**B-migration with aura: (classic or complicated migraine)**

-migraine is usually preceded by an aura

**Aura?** Fully **reversible neurological symptoms** with a gradual onset, usually followed by a headache

-from 5 to 60 min (usually **20 min**), relieve without lingering neurologic deficits

-if **aura occurs without headache**, we call it (**acephalgic migraine**)

Cause: the spread of **hyperpolarization** of the cortex followed by a wave of **depolarization (cortical spreading depression)**

-imaging shows that during aura regional cerebral **blood flow decreases** but not to an ischemia level

-Aura types:

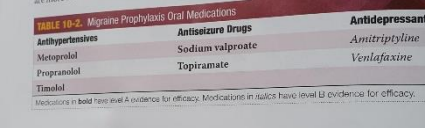
Visual aura	Sensory aura	Hemiplegic migraine
<p>-<b>most common</b> Include: 1-<b>fortification spectrum (Zigzag lines)</b> observed off the central vision, typically spreading gradually) 2-<b>scintillating (or flickering) scotoma</b>: An area of <b>decreased visual acuity</b> surrounded by preserved vision</p>	<p><b>paresthesia</b> -tingling or pins-and-needles sensation -progress gradually (spreading along a limb <b>or</b> extending from one part to another from an arm to the leg or face)</p>	<p>-<b>severe</b> in nature -general onset of <b>weakness</b> -sporadic Vs familial hemiplegic migraine syndrome</p>

**Complications associated with migraine:**

Status migrainous	Stroke risk associated with migraine	Migraine with menses	Chronic migraine
<p>-last <b>more than 72 h</b> -caused by <b>abortive medication overuse (rebound headache)</b> -TX: IV or a brief course of oral <b>steroid</b> to break the headache cycle</p>	<p>-aura migraine increases CVS risk -aura migraine + <b>estrogen-based contraceptive</b> increases <b>stroke</b> risk</p>	<p>-<b>women</b> with migraine usually suffer <b>worsening</b> of symptoms during <b>menses</b> -<b>exacerbation</b> occurs <b>1 to 2 days</b> before bleeding and may <b>persist to 3 days</b> into the menstrual period -some patient suffers from migraine <b>only during menses (pure menstrual migraine)</b></p>	<p>-<b>diagnoses</b>: headache more than <b>15 days/months for more than 3 months</b> (not all patients have typical features of migraine but they must have at <b>least 8 days</b> of headache) -chronic migraine patients suffer from <b>medication overuse headaches (MOH)</b> due to frequent use -Effective <b>TX</b> can revert it to <b>episodic migraine</b></p>

**Migraine treatment:**

<p><b>1-abortive TX (rescue medication)</b></p>	<p>-used to <b>stop</b> migraine, most affected when taken at the <b>onset</b>, <b>delay</b> Tx results in more <b>prolonged disability</b> -<b>NSAIDs + triptans</b> (serotonin 1b/1d agonists) are the mainstay of abortive TX -many patients respond well to <b>NSAIDs alone</b>, but others may require <b>triptans if NSAIDs are insufficient or contraindicated</b>, <b>Triptane and NSAIDs</b> can be <b>combined</b> and have <b>synergistic</b> effects in treating migraine pain</p>
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	<p><b>Triptans</b></p> <ul style="list-style-type: none"> <li>-numerous different types with different rates of onset, half/lives, formulations (oral pills, disintegrating tablets, nasal sprays, and injectables)</li> <li>-2 long-acting (naratriptan, frovatriptan), 5 fast-acting (almotriptan, eletriptan, sumatriptan, rizatriptan, zolmitriptan)</li> <li>- not safe during pregnancy and has a CVS risk</li> <li>- it interacts with antidepressant-like SSRIs and SNRIs that lead to <b>low risk of serotonin syndrome</b> (recent medications: “ditans” which are 5HT1F agonists and “gepants” which are CGRP blockers)</li> <li>-historically ergotamines were used but have been replaced due to their higher CVS risk</li> <li>-caffeine is added to migraine Tx due to its pain-aborting properties</li> <li>-chronic use of abortive TX more than <b>twice a week</b> can lead to <b>medication overuse headache (MOH)</b></li> </ul>
<b>2-adjvant Tx</b>	<ul style="list-style-type: none"> <li>-<b>antiemetics</b> &gt; used for nausea and vomiting associated with migraine</li> <li>-<b>prochlorperazine</b> and <b>metoclopramide</b> more effective than ondansetron</li> <li>-prevent patients from vomiting their <b>abortive therapies</b></li> <li>-used in ER for <b>severe refractory migraine</b> causes</li> <li>-combined with <b>ketorolac</b> and <b>diphenhydramine</b> to Treat <b>status migrainosus</b></li> </ul>
<b>3-preventive Tx (Prophylactic Tx)</b>	<ul style="list-style-type: none"> <li>-used for <b>chronic migraine or frequent and disabling headaches</b> that do not respond to <b>abortive TX</b></li> <li>-Patients needing preventive TX also need abortive TX (it is important to consider interaction between them)</li> <li>-it <b>reduces frequency and severity</b> but <b>can't eliminate headache</b> completely</li> <li>-patient should remain on Tx for <b>at least a month</b> to evaluate effectiveness</li> <li>-<b>3 primary categories:</b></li> </ul>  <ul style="list-style-type: none"> <li>-<b>onabotulinum toxin A</b> and <b>Calcitonin Gene-related peptide (CGRP) antagonists</b> like <b>erenumab</b> can be used in <b>chronic migraine</b></li> </ul>
<b>4-life style modification</b>	<ul style="list-style-type: none"> <li>-comorbid sleep disorder (insomnia, OSA), skipping meal, insufficient fluid, excessive caffeine intake, and lack of exercise can <b>increase the risk for migraine</b></li> <li>-patient should be <b>counseled</b></li> </ul>

## 2-Tension-type headache:

- also called **stress** or **ordinary** headache, **2 MC** primary headache
- bilateral pain** described as **pressure or tightness, mild to moderate**, lasting for **under an hour to several days**
- not associated** with phonophobia, photophobia, nausea, vomiting
- Phx: generally **normal**, but some patients have **pericrania tenderness** to palpation of the scalp, neck, or shoulder muscles
- can be **episodic** or **chronic (more than 15 days/month)**
- usually don't seek medical attention (**no significant disability**)
- chronic and frequent tension-type usually benefit from TX

### -treatment

<p><b>Abortive Tx:</b></p> <ul style="list-style-type: none"> <li>-<b>mild pain</b> (not required)</li> <li>-<b>moderate to severe (NSAIDs)</b> primary option)</li> <li>-alternatives <b>aspirin</b> and <b>acetaminophen</b> (less effective)</li> <li>-counseling: (about MOH and not to use analgesics more than twice a week for long period)</li> </ul>	<p><b>Adjuvant Tx</b></p> <ul style="list-style-type: none"> <li>-identify triggers (stress, physical, and emotional)</li> <li>-<b>biofeedback</b> (a mind-body technique used to teach patients greater body awareness and how to control some physical reactions to pain and stress)</li> <li>-<b>physical therapy</b> (poor posture and neck muscle spasms can cause chronic tension-type headache)</li> </ul>	<p><b>Preventive Tx:</b></p> <p><b>1-antidepressant:</b></p> <ul style="list-style-type: none"> <li>-First-line preventive therapy for chronic tension headache (tricyclic <b>amitriptyline</b>)</li> <li>-second line mirtazapine and venlafaxine (another antidepressant)</li> </ul> <p><b>2- muscle relaxant:</b></p> <p><b>Tizanidine</b> is helpful in patients with a <b>cervicogenic component</b></p>
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## Trigeminal Autonomic Cephalalgias (TACs):

-The 3<sup>rd</sup> major category of primary headache, characterized by **unilateral pain** that is associated with **cranial autonomic symptoms**

- types: **A-cluster headache** **B-short-lasting unilateral neuralgiform headache** **C-hemicrania**

### A-cluster headache

-severe headache with **unilateral pain** in the **orbit, supraorbital, temple**, or a combination

-recurrent **attack lasting weeks to months** followed by **remission lasting months to years**

-excruciating pain often leads to **restlessness and pacing** during the attack



-associated **cranial autonomic symptoms**:

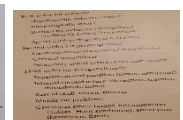
(conjunctival injection, lacrimation, nasal congestion, rhinorrhea, Eyelid edema, forehead and facial sweating or flushing, sensation of fullness in the ears, miosis, ptosis)

-typically, between **15 and 120 min** occurs **several times a day**, more common in **men**, affecting early to mid-adult hood (**20-40**)

-**unknown** cause but **activation of the posterior hypothalamic gray matter** has been noted in some patients also **alcohol, histamine, and nitroglycerin** are considered triggers.

-types: **episodic or chronic** (intractable headaches with <1 month of remission)

Horner syndrome can mimic cluster headache but lacks typical pain characteristic



**-Treatment:**

Abortive Tx:	Preventive Tx:
<ul style="list-style-type: none"> <li>-<b>oxygen therapy</b>: 100% oxygen delivered at <b>12 to 15L/min</b>, used in an urgent care setting or at home (home oxygen tank)</li> <li>-if patient do not respond use <b>triptan</b> (<b>sumatriptan, zolmitriptane</b>)</li> <li>-<b>occipital nerve Block</b> effective for abort cluster cycle</li> <li>-in the past dihydroergotamine was used instead of triptan</li> </ul>	<ul style="list-style-type: none"> <li>-similar to migraine preventive Tx (antihypertensive, antiseizure, psychiatric)</li> <li>-the first line is <b>verapamil</b>, but if contraindicated <b>glucocorticoids</b> (prednisone or dexamethasone)</li> <li>-second line: lithium and topiramate</li> </ul>

### B-short-lasting unilateral neuralgiform headache attacks:

-**unilateral, moderate to severe** headache around the **orbit or temple**, may occur in the trigeminal distribution (**mistaken for trigeminal neuralgia**)

-**stabbing pain or recurrent stabbing** sensation lasting from **1 sec to 10 min**

-A brain **image MRI** is crucial to differentiate it from a **secondary headache** due to a **lesion in the posterior fossa**

**-two types:**

**1-short-lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT)**

Conjunctival infection and lacrimation

**2-short-lasting unilateral neuralgiform headache attack with cranial autonomic symptoms (SUNA)**

At least 1 of the following (forehead or facial sweating or fusing, ptosis and miosis, eyelid edema, nasal congestion, rhinorrhea, ear fullness, (either conjunctival injection or lacrimation but not both))

-SUNCT and SUNA can be **episodic** or **chronic** (diagnosed by persistent symptoms lasting **more than a year** or **less than a year with less than 1 month of remission**)

Abortive Tx	Preventive TX
-IV lidocaine	-antiseizure medications (topiramate, gabapentin, lamotrigine) used in <b>frequent or recurrent symptoms</b> - <b>occipital nerve block</b> is used when systemic medication is contraindicated or not tolerated

## C-Hemicrania:

-unilateral orbital or temporal headache with a unique response to indomethacin (different from other TACs) associated with autonomic symptoms on the same side

-variant (by duration of symptoms)

**1-episodic paroxysmal hemicranias:** recurrent attack lasting **2-30min**, separated by at least **one** pain-free **month**

**2-chronic paroxysmal hemicranias:** recurrent attacks lasting **2-30min**, **without remission** or with **less than 1 month** of remission before recurrence

**3-Hemicrania continua:** intractable **pain** and **autonomic symptoms** persisting for **more than 3 months**

-all 3 types respond to indomethacin, F>M, occurs in mid-adulthood (30-40), MRI to exclude 2 headache by posterior fossa lesion

**-Abortive and preventive Tx:**

**Indomethacin:** (definitive TX, gradually titrated over 10 days to a maximum of 225 mg a day divided into 3 doses, until the patient has therapeutic response) If no response finds other diagnosis

## Opioid in headache Treatment:

-are not superior to alternative therapies, strongly discouraged in headache medication

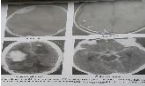
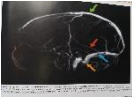
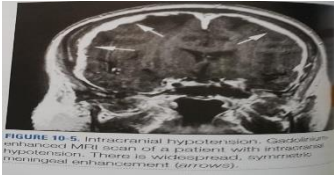
-risk:1- developing secondary opioid use disorder 2-cause MOH

## Secondary headache:

-headache caused by **medical conditions or medications** (preeclampsia, pheochromocytoma, fever, medical SE), addressing the cause is important in Tx.

-often accompanied by additional history, examination, or laboratory findings aiding in diagnosis

-6 primary categories:

Vascular causes:	Intracerebral pressure disorder	Medication
<p><b>1-cerebral hemorrhage:</b></p> <ul style="list-style-type: none"> <li>-all cerebral hemorrhages <b>cause headache</b> (SAH, intraparenchymal hemorrhage, subdural, epidural)</li> <li>-<b>spontaneous</b> (due to stroke or hypertension) vs <b>traumatic</b></li> <li>-<b>intracerebral hemorrhage</b> typically presents with <b>thunderclap headache</b> (abrupt and severe onset)</li> <li>-emergency imaging (<b>non-contrast CT brain scan</b>) is needed to evaluate <b>abrupt-onset headache</b></li> <li>-<b>cerebral vessel imaging</b> is needed after <b>SAH</b> identification to asses of an <b>aneurysm</b></li> </ul>  <p><b>2-Ischemic stroke:</b></p> <ul style="list-style-type: none"> <li>-associated with a headache that is abrupt in onset</li> <li>-focal <b>neurologic deficit</b> (aid in diagnosis)</li> </ul> <p><b>3-cerebral thrombosis:</b></p> <ul style="list-style-type: none"> <li>-<b>arterial or venous</b> thrombosis can cause headache</li> <li>-<b>venous sinus thrombosis</b> headache usually presents with <b>increased ICP</b></li> <li>-considered in patients with <b>hypercoagulable</b> state (pregnancy)</li> <li>-diagnosis by imaging (<b>cerebral vessels</b>)</li> </ul>  <p><b>4-cerebral vasculitis:</b></p> <ul style="list-style-type: none"> <li>-cause nonspecific <b>headache</b> + paroxysmal <b>focal neurological deficits</b></li> <li>-can be part of <b>systemic vasculitis</b> (secondary angiitis) or <b>isolated</b> to cerebral vessels (primary CNS angiitis)</li> <li>-for diagnosis: <b>cerebral arterial vessel imaging</b> +<b>lumbar picture (LP)</b></li> </ul> <p><b>5-giant cell arteritis (GCA):</b></p> <ul style="list-style-type: none"> <li>-also called <b>temporal arteritis</b></li> <li>-<b>peripheral cranial arterial vasculitis</b>, present with <b>unilateral headache</b></li> <li>-patient &gt;<b>50 years</b>, present with <b>vision changes (amaurosis fugax), jaw claudication, fever, and scalp tenderness</b></li> <li>-can cause <b>blindness</b> if involves ECA and ophthalmic artery branches</li> <li>-elevated <b>inflammatory markers (ESR, CPR)</b> are common</li> <li>- <b>temporal artery biopsy</b> is the gold standard, but also <b>serial biopsies</b> can also be done because GCA can cause skip lesions</li> </ul>	<p><b>1-intracranial hypertension:</b></p> <ul style="list-style-type: none"> <li>-causes: <b>idiopathic</b> (obese young women), <b>medication, systemic disorder</b></li> <li>-worse when <b>supine or sleep</b> (awake patient from sleep), or with <b>Valsalva maneuver</b></li> <li>-associated features: <b>papilledema, pulsatile tinnitus, or visual symptoms</b></li> <li>-imaging: to exclude a <b>mass lesion or venous sinus thrombosis</b></li> <li>-if imaging is unrevealing, diagnosis is made with a <b>LP</b></li> <li>- <b>elevation of ICP</b> above 200mm CSF</li> <li>-<b>acetazolamide</b> &gt; idiopathic intracranial hypertension (first line Tx)</li> <li>-monitor the visual field and treat obesity</li> </ul> <p><b>2-intracranial hypotension:</b></p> <ul style="list-style-type: none"> <li>-<b>improves with supination</b> but worsens with standing</li> <li>-severe pain at the vertex and associated with neck pain or tinnitus</li> <li>-May be spontaneous or traumatic</li> <li>-usually, it's due to <b>epidural puncture or LP</b> (traumatic cause)</li> <li>-dural leak usually <b>heals without intervention</b> but if <b>symptoms persist or when the etiology</b> is unclear (<b>brain MRI</b> may help show evidence of sagging) a <b>blood patch</b> may be attempted.</li> <li>-definitive diagnosis is by <b>LP</b> (CSF pressure below 60 mm)</li> </ul>  <p>FIGURE 10-5. Intracranial hypotension. Axial contrast-enhanced MRI scan of a patient with intracranial hypotension. There is widespread, symmetric, ringlike enhancement (arrows).</p>	<ul style="list-style-type: none"> <li>-various medications including hormonal therapies like <b>contraceptives</b> and <b>nitric oxide</b>, can cause headaches.</li> <li>-<b>Discontinuation or withdrawal</b> of certain medications can also trigger headaches(<b>caffeine</b>)</li> <li>- Headache characteristics are nonspecific, but the temporal association to medication change helps establish the diagnosis</li> <li><b>Medication Overuse Headache (MOH)</b> also known as <b>rebound headache</b>, occurs when patients excessively use abortive therapy <b>more than 10 times per month for over 3 months</b>, leading to exacerbation of the baseline headache disorder.</li> </ul>
<p><b>Neoplastic cause</b></p> <ul style="list-style-type: none"> <li>-<b>intracranial neoplasm</b> causes headaches, especially with significant <b>mass effect</b></li> <li>-the <b>headache</b> characteristics may not be specific but can include features of <b>intracranial hypertension</b>, including <b>wakening</b> the patient from sleep, being <b>worse when supine</b>, and worse with <b>Valsalva maneuver</b></li> <li>- can occur <b>early or late</b> with neoplasms and with any type of primary cancer</li> </ul>	<p><b>Infectious or inflammatory causes</b></p> <ul style="list-style-type: none"> <li>-<b>intracranial infection</b> such as <b>encephalitis and meningitis</b> cases (<b>headache</b>, fever, nuchal rigidity, altered mental status)</li> <li>-if infection progresses (seizures, focal neurological deficits)</li> <li>-infection can be <b>bacterial, viral, fungal, or parasitic</b>, and headache features <b>do not distinctly indicate the underlying cause</b></li> <li>-diagnosis: <b>lumbar puncture</b></li> <li>-Also, <b>CNS inflammatory</b> and <b>autoimmune conditions</b> such as <b>sarcoidosis</b> and <b>lupus</b> frequently present with headache</li> </ul>	<p><b>Traumatic causes</b></p> <ul style="list-style-type: none"> <li>-<b>Head and neck trauma</b> frequently leads to headaches.</li> <li>-severity of the headache may <b>not directly correlate</b> with the severity of the injury (minor trauma like whiplash can cause headaches.)</li> <li>-Patients with significant head or neck trauma require assessment for <b>intracranial hemorrhage</b> or <b>dissection of the cervical vessels</b></li> </ul>

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#### VI) Head and neck disorders

There are many different structural disorders that can cause headache

Treatments are based on the specific causes identified, and these disorders may occur simultaneously with other primary or secondary headache disorders

Sinusitis is commonly associated with a headache

It may be bifrontal or unilateral

Acute sinusitis is often associated with other symptoms of a respiratory tract infection

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Temporomandibular joint disorder (TMD) is another common cause of headache and may be unilateral or bilateral

On exam, there may be evidence of dental wearing (chipped and flattened teeth) and discomfort on palpation of the joint

Cervicogenic headaches are also common and may be identified by palpation of myofascial trigger points in the neck

Cervical range of motion is often reduced

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#### VII) Trigeminal neuralgia

The pain of trigeminal neuralgia is shock-like, occurring in one or all branches of the trigeminal nerve

The pain is usually paroxysmal and recurrent

It may be triggered by common activities such as brushing hair or teeth

It may be idiopathic or due to structural causes such as a mass or vascular lesion, or a demyelinating lesion of multiple sclerosis

Carbamazepine is a common first-line treatment

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97  
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#### VIII) SUMMARY

Migraines, tension headaches, and TACs are the 3 most common types of primary headache disorders

The International Headache Society maintains an evidence-based categorization of primary and secondary headache disorders

If a headache history and pattern is not consistent with a primary headache disorder, the clinician should consider a secondary headache disorder, review the rare types of primary headache disorders, or consider that the headache may be a combination of more than one headache disorder

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Done by Maysana AL-yacoub