Headache

Most headaches are attributable to sustained muscular contraction; about one in ten are due to vascular causes, and only about two in every 100 cases of headache are attributable to inflammatory lesions or intracranial masses. Danger signals suggesting an ominous headache:
• sudden onset without previous history
• recent onset for the first time in an older person
• recurrent in children
• progressive
• wakes the patient at night
• localized pain in definite area or structure, e.g., ear, eye
• precipitated by raised intracranial pressure, e.g.,
coughing
• associated neurological signs or symptoms
  o convulsions
  o fever
  o confusion
  o impaired consciousness
  o neck stiffness
  o dizziness/vertigo
  o personality change

A truncated neurological exam that will catch most ominous headaches consists of the following:
• Gait testing
• Romberg's test
• Funduscopy
• Pupils
• Visual fields
• Motor power
• Reflexes
• Blood pressure
• Plantar reflex (Babinski)

A full description of the pain should be obtained. This includes:
• Location
• Radiation
• Frequency
• Duration
• Onset and offset
• Precipitating factors
• Aggravating and relieving factors
• Associated symptoms

The patient who wakes with headache could have vascular headache (migraine), cervical spondylosis, depression, hypertension, or a space-occupying lesion. It is usual for migraine to last hours, not days, which is more characteristic of tension headache. The pain of frontal sinusitis follows a typical pattern, onset around 9 am, building to a maximum by about 1 pm, then subsiding over the next few hours.

Once an ominous headache is ruled out, appropriate conservative treatment can be applied.

**Subarachnoid Hemorrhage**
A severe headache of sudden onset is subarachnoid hemorrhage until proved otherwise. Clinical features:
• Sudden onset headache (moderate to severe)
• Occipital location
• Localized at first, then generalized
• Pain and stiffness of the neck follows
• Vomiting and loss of consciousness often follow
• Kernig's sign positive
• Neurological deficit may include
  o Hemiplegia (if intracerebral bleed)
  o Third nerve palsy (partial or complete)
**Temporal Arteritis**
Temporal arteritis is usually a persistent unilateral throbbing headache in the temporal region with scalp sensitivity. It is related to polymyalgia rheumatica - 20% of sufferers will develop temporal arteritis. It occurs in those over 50 years (mean age is 70 years). The pain is described as a severe burning pain that is usually constant and getting worse. It tends to be worse in the morning. It can be associated with malaise, vague aches and pains (especially of neck), and weight loss. The ESR is usually markedly elevated, but may be normal.

**Cervical Dysfunction Headache**
Cervical dysfunction is an important cause of headache. Referral of pain from disorders of the upper cervical spine to the head and eye is due to afferent fibers from the upper three cervical nerve roots converging on cells in the dorsal horn of the spinal cord, thus conveying to the patient the impression of head pain through this shared pathway.

Cervical dysfunction (cervicogenic) headache may be quite localized or diffuse, extending from the occiput through the vertex or bitemporal regions. Palpation of the facet joints from the occiput to the third cervical can frequently reproduce some or all of the patient's headache and the joints will be tender. This indicates the headache is of cervical origin.

The patient with a spine joint dysfunction requiring thrust in the neutral position (synovial fixation) may complain of stiffness in the neck or upper back, may tug on the upper thoracic spinous processes, may point to spots of pain in the spine, or point to the rim of the atlas behind the ear.

Myofascial layer disruption type of joint dysfunctions hurt deep in the joint and a test of traction and compression is used to determine if the thrust is made with traction or compression. If the patient reaches over the shoulder and tugs up on the mid-posterior ribs with the fingers, this indicates a traction dysfunction of the costovertebral joints. The manipulation is performed with one hand placed above the superior rib of the involved joint, and the other hand placed below the inferior rib. Traction is maintained for several seconds and then a thrust is given.

The discovery of a soft tissue bridge from the rectus capitis posterior minor muscle to the dura mater may explain why cervical manipulation is successful for headache.
Myofascial bands can be involved in benign headache. The patient may complain of a pulling or burning pain from the upper back or neck into the back of the head. This is treated with firm stroking pressure of the thumb along the band starting in the mid-interscapular area up through the ipsilateral cervical musculature to the mastoid bone.

If the patient complains of a dull ache behind the eye, the myofascial band starting at the TMJ and traveling over the eyebrow ridge to the lacrimal bone is treated. The trigger point in the muscle overlying the lacrimal bone is also treated at this time. This band and trigger point is treated gently compared to other bands.

The patient may also complain of a scalp headache that follows a specific line. This is also treated with myofascial band technique. Tension and pain in the suboccipital region is treated with stroking release with the thumb starting in the midline and extending laterally to the mastoid bone.

Herniated trigger points are a common cause of benign headache. One-sided headache with the head tilted to the side of pain is an indication of an upper trapezius trigger point.

Trigger points in the frontalis muscle cause pain that spreads up and over the forehead on the same side.

Trigger points in the occipitalis muscle cause pain that spreads laterally and diffusely over the back of the head and through the cranium to behind the eye.

Referred pain from the suboccipital muscles can cause headache pain along the side of the head.
Headache due to trigger points in the temporalis muscle is described as pain felt widely throughout the temple, along the eyebrow, behind the eye, and in any or all of the upper teeth.

Sternocleidomastoid trigger points can be mistaken for vascular or atypical facial pain.

Headache occurring behind the eye can be due to:
• Upper cervical facet joint dysfunctions affecting the greater occipital nerve
• Trigger point of the orbicularis oculi over the lacrimal bone
• Temporalis muscle trigger point
• Occipitalis muscle trigger point
• Myofascial band from the TMJ to the lacrimal bone

A trigger point in the diagastric muscle can cause pain that extends up behind the ear to the back of the head.

If a patient complains of a squeezing headache or squeezes an area of the scalp, this indicates **superficial fascia disruption** and should be treated with double thumb technique.

**Migraine Headache**
Migraine headache is a periodic unilateral headache that may begin in childhood but almost always develops before the age of 30. The pain of migraine
headache is usually priorbital or retro-orbital, pounding in nature and severe. The onset-to-peak of migraine headache is rapid, ranging from 20 minutes to one hour. In contradistinction to tension-type headache, migraine headache is often associated with systemic symptoms, including nausea and vomiting, photophobia, and sonophobia, as well as alterations in appetite, mood and libido. Menstruation is a common trigger of migraine headaches. Migraine that presents without other neuralgic symptoms is called migraine without aura.

**Tension-Type headache**
Formerly called muscle contraction headache, is the most common headache. It can be episodic or chronic, and may or may not be related to muscle contraction. Tension-type headache is usually associated with stress and is usually bilateral but can be unilateral, and often involves the frontal, temporal, and occipital regions. It may present as a bandlike nonpulsatile ache or tightness with neck pain.

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<thead>
<tr>
<th></th>
<th>Migraine Headache</th>
<th>Tension-Type Headache</th>
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<tbody>
<tr>
<td>Onset-to-peak Frequency</td>
<td>Minutes to 1 hour</td>
<td>Hours to days</td>
</tr>
<tr>
<td></td>
<td>Rarely more than 1 per week</td>
<td>Often daily or continuous</td>
</tr>
<tr>
<td>Location</td>
<td>Temporal</td>
<td>Nuchal or circumferential</td>
</tr>
<tr>
<td>Character</td>
<td>Pounding</td>
<td>Aching, pressure, bandlike</td>
</tr>
<tr>
<td>Laterality</td>
<td>Always unilateral</td>
<td>Usually bilateral</td>
</tr>
<tr>
<td>Aura</td>
<td>May be present</td>
<td>Never present</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>Common</td>
<td>Rare</td>
</tr>
<tr>
<td>Duration</td>
<td>Usually less than 24 hours</td>
<td>Often for days</td>
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Cluster Headache
Unlike other common headache disorders that affect primarily females, cluster headache happens much more frequently in males. The onset of cluster headache occurs in the late third or early fourth decade of life. Attacks of cluster headache will generally occur approximately 90 minutes after the patient falls asleep. During a cluster period, attacks occur two to three times a day and last for 45 minutes to 1 hour. Cluster periods usually last for 8 to 12 weeks, interrupted by remission periods of less than two years. Cluster headache is characterized as a unilateral headache that is retro-orbital and temporal in location. The pain has a deep burning or boring quality. Physical findings during a cluster attack may include Horner’s syndrome, facial flushing, profuse lacrimation and rhinorrhea, and conjunctival injection.

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<thead>
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<th>Table 4–1. Comparison of Cluster Headache With Migraine Headache</th>
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<tbody>
<tr>
<td>Cluster Headache</td>
</tr>
<tr>
<td>Gender</td>
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<tr>
<td>Age of onset</td>
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<tr>
<td>Family history</td>
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<tr>
<td>Aura</td>
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<tr>
<td>Chronobiological pattern</td>
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<tr>
<td>Onset-to-peak frequency</td>
</tr>
<tr>
<td>Frequency</td>
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<tr>
<td>Duration</td>
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Analgesic Rebound Headache
This is a recently identified headache that occurs commonly in headache sufferers who overuse abortive medications. The patients will suffer daily headache, which becomes increasingly unresponsive to analgesics and patients will note an exacerbation of headache symptoms if abortive analgesic medications are missed or delayed. All patients with the recent onset of chronic daily headache should undergo MRI of the brain and, if significant occipital or nuchal symptoms are present, of the cervical spine.
Occipital Neuralgia
This is usually due to blunt trauma to the greater and lesser occipital nerves. Repetitive microtrauma from working with the neck hyperextended (painting ceilings) or working for prolonged periods with computer monitors whose focal point is too high may also cause occipital neuralgia. The pain of occipital neuralgia is characterized as persistent pain at the base of the skull with occasional sudden shock-like paresthesias in the distribution of the greater and lesser occipital nerves.
References


