Headache:

- **Tension-type headache (TTH):**

The most common cause of headache characterized by bilateral, holocephalic, band-like tightness and pressure with a pounding character beginning usually in late morning and persisting throughout the day.

Unlike migraine, nausea and vomiting are rare, occurring only in cases of severe pain.

Women tend to be affected more than men.

TTH may be episodic or chronic (present for > 15 days per month) analgesic overuse is a major contributing factor to the transformation from episodic TTH to chronic daily headache (analgesic rebound syndrome).

Some clinical scientists divide TTH into two clinical subtypes: without tender pericranial muscles, and with tender pericranial muscles. The two conditions are distinguished by a patient response to palpation of pericranial muscles during a headache attack.

The muscles involved include the frontalis, temporalis, suboccipitalis, masseter, other paravertebral and cervical muscles, and even the muscles of facial expression. The condition most commonly confused with TTH is myofascial pain dysfunction (MPD) of the muscles of mastication.

NSAID and tricyclic antidepressants are effective.

- **Migraine:**

The classic theory is that migraine is caused by vasoconstriction of intracranial vessels (which causes the neurologic symptoms), followed by vasodilation (which results in pounding headache).

Migraine is more common in women.

Classic migraine starts with a prodromal aura that is usually visual but that may also be sensory or motor. The visual aura that commonly precedes classic migraine includes flashing lights or a localized area of depressed vision (scotoma). Sensitivity to light, hemianesthesia, aphasia, or other neurologic symptoms may also be part of the aura, which commonly lasts from 20 to 30 minutes.

The aura is followed by an increasingly severe unilateral throbbing headache that is frequently accompanied by nausea and vomiting.

Headaches characteristically last for hours up to 2 or 3 days. The patient characteristically lies down in a dark room and tries to fall asleep. Most migraines do not occur more than 2 to 4 times a month

Patients with migraine should be carefully assessed to determine common food triggers such as nuts, chocolate, and red wine. In addition to stress; sleep deprivation; or hunger.

Drugs that are useful in aborting migraine include ergotamine and sumatriptan**.** Drugs that are used to prevent migraine include propranolol, verapimil, and TCAs.

Facial migraine is a clinical variant of migraine in which the major location of the migraine is within the orofacial complex, including the jaws, TMJ, dentition, salivary glands, and maxillary sinus. The pattern is usually similar to that seen in other forms of migraine and an aura may be present or the pain onset can be without warning.

Facial migraine is frequently incorrectly diagnosed as dental pathology. A key report by most patients with facial migraine is a report that the pain stops after sleeping. Another key clinical report that should cause the clinician to consider migraine is the report that light and sound increase symptoms, or that nausea occurs with pain episodes.

- **Cluster headache (CH):**

Eighty percent of patients with CH are men. The attacks are sudden, unilateral, and stabbing, causing patients to pace, cry out, or even strike objects. Some patients exhibit violent behavior during attacks.

Individuals with CH frequently describe the pain as a hot metal rod in or around the eye. The symptoms most commonly affect the area supplied by the first division of the trigeminal nerve, but second-division symptoms may also occur.

The severe painful episodes begin without an aura. Each attack lasts from 15 minutes to 2 hours and recurs several times daily for 4 to 6 weeks and then may be without pain for months or even years.

A majority of the painful episodes occur at night, often waking the patient from sleep.

The pain is associated with autonomic symptoms, particularly nasal congestion and tearing. Sweating of the face, ptosis, increased salivation, and edema of the eyelid are also common signs.

An acute attack of CH can be aborted by breathing 100% oxygen**.** Other drugs that are useful for preventing attacks include ergotamine, prophylactic prednisone, and calcium channel blockers.

- **Cranial arteritis:**

Cranial arteritis (giant cell arteritis) is an immune-mediated chronic inflammatory disease involving the medium-sized branches of the carotid arteries. The temporal artery is the most commonly involved branch (temporal arteritis).

Cranial arteritis is caused by immune abnormalities, resulting in inflammatory infiltrates in the walls of arteries.

Cranial arteritis most frequently affects adults above the age of 50 years. Patients have a throbbing headache accompanied by generalized symptoms including fever, malaise, and loss of appetite. Examination of the involved temporal artery reveals a thickened pulsating vessel.

Since the maxillary and lingual arteries may be involved, a throbbing pain in the jaw or tongue may be an early sign or even a presenting sign. A serious complication in untreated patients is ischemia of the eye, which may lead to progressive loss of vision or sudden blindness.

Laboratory abnormalities include an elevated erythrocyte sedimentation rate (ESR) and anemia. Abnormal C-reactive protein may also be an important early finding. The most definitive diagnostic test is a biopsy specimen**.**

Individuals with cranial arteritis should be treated with systemic corticosteroids as soon as the diagnosis is made. The initial dose ranges between 40 to 60 mg of prednisone per day, and the steroid is tapered once the signs of the disease are controlled. The ESR may be used to help monitor disease status. Patients are maintained on systemic steroids for 1 to 2 years after symptoms resolve. Steroids may be supplemented by adjuvant therapy with immunosuppressive drugs, such as cyclophosphamide, to reduce the complications of long-term corticosteroid therapy.

Other causes of headache:

- *Brain tumor*; intermittent deep, dull of moderate intensity that worsen with physical exertion and associated with nausea and vomiting.

- *Intracranial hemorrhage*; severe acute headache associated with a stiff neck in the absence of fever are highly suggestive of subarachnoid hemorrhage.

- *Lumber puncture*; headache following lumber puncture usually begin 2 days to 2 weeks following the procedure. Head pain that worsens

with positional changes. Loss of cerebrospinal fluid decreases the brain´s supportive cushion.

- *idiopathic intracranial hypertension*; headache that resembling that of brain tumor is a common presenting symptom of raised intracranial pressure, usually resulting from impaired CSF absorption by arachnoid villi. This disorder called pseudotumor cerebri.

- *Postconcussion*;

Analgesic medications;

- Ergotamine2mg, cyclizine50mg, caffeine100mg (Migril);
1 tab. At onset of attack
Max 3 per attack, 5 in one week

- Sumatriptan (Imigran);
50, 100 mg after onset of attack
Max. 300mg daily

- Propranolol
40mgx2 or x3 daily

- Carbamazepine
Initially 100mgx2 increasing gradually to 600-800mg daily in divided dose.
Max. 1600mg daily

- Gabapentin
300mgx1 on day 1
300mgx2 on day 2
300mgx3 on day 3
To max. 1800mg per day

- Ibuprofen
200mgx3, 400mgx3
Max. 2400mg daily

- Mefenamic acid (Ponstan):
500mg three times daily

- Naproxen
250-500mg x2

- Diclofenac
25-50mgx 3

- Tramadol;
50, 100 mg x4 daily
Injection 50, 100 mg IM, IV x 4
Max. dose 400 mg daily

References

- *Burket's oral medicine 2008*