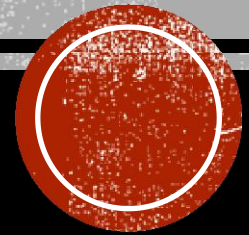


NEUROPSYCHIATRIC  
ASPECTS OF  
HEADACHE



# OUTLINE

- Introduction
- International Headache Society-II (IHS-II) Classification System for Headaches
- Migraine
- Tension-Type Headache
- Cluster Headache
- Epidemiology and Course
- Etiology
- Psychiatric conditions associated with headache
- Diagnosis and Clinical Evaluation
- Treatment
- References
- Conclusion



# INTRODUCTION

- **Headache** is the symptom of pain anywhere in the region of the head or neck.
- It occurs in migraines (sharp, or throbbing pains) tension-type headaches and cluster headaches
- Frequent headaches can affect relationships and employment.
- There is also an increased risk of depression in those with severe headaches.



# INTRODUCTION

- Headaches can occur as a result of many conditions whether serious or not.
- Number of different classification systems for headaches.
- Most well-recognized is that of the International Headache Society.
- Causes of headaches may include dehydration, fatigue, sleep deprivation, stress, the effects of medications, the effects of recreational drugs, viral infections, loud noises, common colds, head injury, rapid ingestion of a very cold food or beverage, and dental or sinus issues



# INTRODUCTION

- The [International Headache Society](#) (IHS) classification system was developed in 1988 provide specific operational criteria for the major headache syndromes
- Introduced a new classification in 2004 to clarify some of the operational criteria for headache syndromes identified in the original set of criteria



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CLASSIFICATION SYSTEM FOR HEADACHES

## PART I. PRIMARY HEADACHES

- Migraine
- Tension-type headache
- Cluster and other trigeminal autonomic cephalgias
- Other primary headache



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CLASSIFICATION SYSTEM FOR HEADACHES

## PART II. SECONDARY HEADACHES

- Headache attributed to head and/or neck trauma (post traumatic headache)
- Headache attributed to cranial or cervical vascular disorder
- Headache attributed to non-vascular intracranial
- Headache attributed to substance or its withdrawal
- Headache attributed to infection
- Headache attributed to a disorder of homeostasis
- Headache or facial pain attributed to a disorder of cranium, neck, eyes, ears, nose, sinus, teeth, mouth or other facial or cranial structures
- Headache attributed to psychiatric disorder



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CLASSIFICATION SYSTEM FOR HEADACHES

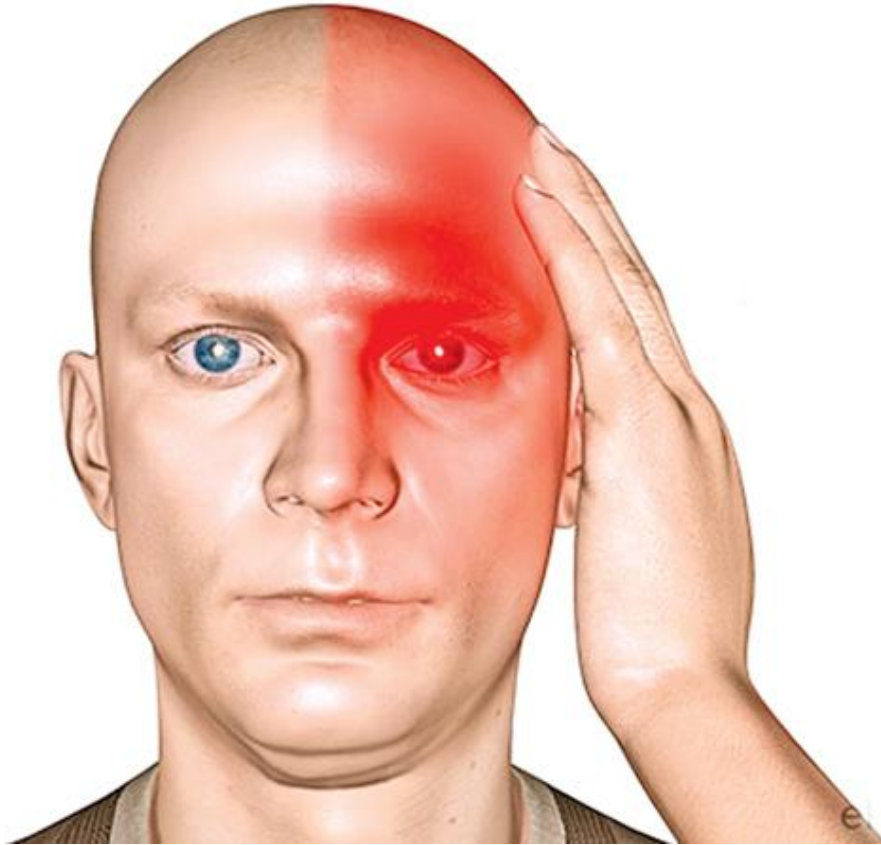
## PART III. CRANIAL NEURALGIAS, CENTRAL AND OTHER FACIAL PAIN AND OTHER HEADACHES

- Cranial neuralgias and central causes of facial pain
- Other headache, cranial neuralgia, central or primary facial pain





# MIGRAINE



# MIGRAINE

- Migraine is a disorder characterized by recurrent attacks or episodes of headache accompanied by other neurologic and gastrointestinal systems.
- Migraine presentation is multifaceted with symptoms emanating from multiple systems, including vascular, neurologic, gastrointestinal, endocrine, and visual.
- Neuropsychiatric evaluation is required for all patients presenting with headache complaints.



# MIGRAINE

- IHS-II criteria for migraine with and without aura are presented
- Core features of most definitions of migraine include recurrent headache that is often unilateral, gastrointestinal symptoms such as nausea or vomiting, and hyperesthesia manifested by photophobia or phonophobia
- Headache generally has a pulsatile or throbbing quality, and the pain is exacerbated by routine physical activity involving movement of the head.



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR MIGRAINE WITHOUT AURA

- A. At least 5 attacks fulfilling criteria B - D
- B. Duration between 4 and 72 hours (untreated or unsuccessfully treated)
- C. At least two of the following
  - Unilateral
  - Pulsating pain
  - Moderate to severe intensity
  - Aggravation by or causing avoidance of routine physical activity (walking or climbing stairs)



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR MIGRAINE WITHOUT AURA

D. During headache at least one of the following:

- Nausea and/or vomiting
- Photophobia and phonophobia

E. Not attributed to another disorder



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR MIGRAINE WITH AURA

- A. At least 5 attacks fulfilling criteria in B - D
- B. Aura consisting of at least one of the following but no motor weakness:
  1. Fully reversible visual symptoms including positive features (e.g., flickering lights, spots or lines) and/or negative features (i.e., loss of vision)
  2. Fully reversible sensory symptoms including positive features (i.e., pins and needles) and/or negative features (i.e., numbness)
  3. Fully reversible dysphasic speech disturbance



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR MIGRAINE WITH AURA

## C. At least two of the following:

1. Homonymous visual symptoms and/or unilateral sensory symptoms
2. At least one aura symptom develops gradually over 5 minutes and/or different aura symptoms occur in succession over 5 or more minutes
3. Each symptom lasts 5 or more minutes and less than or equal to 60 minutes

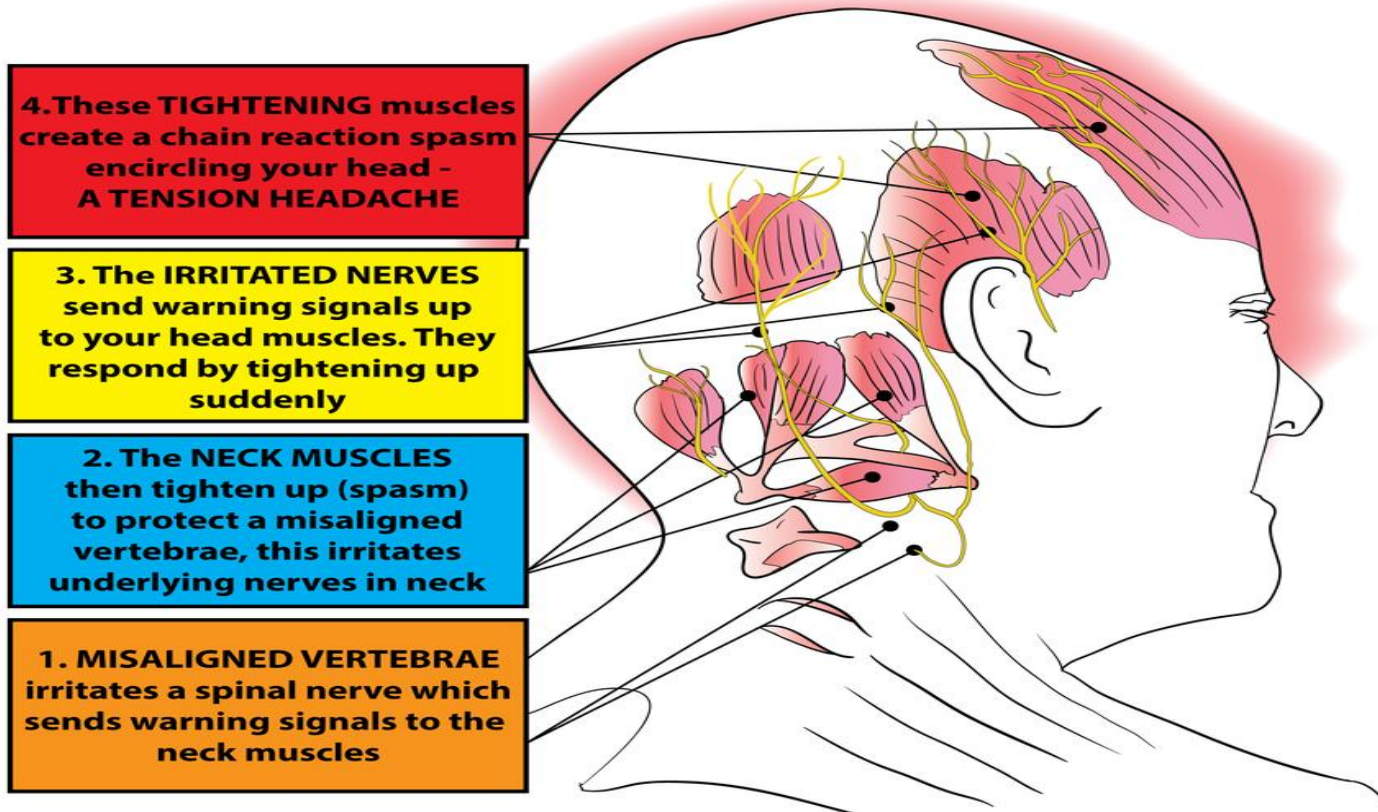
D. Headache fulfilling criteria B - D for Migraine without Aura begins during the aura or follows within 60 minutes

E. Not attributed to another disorder



# TENSION-TYPE HEADACHE

## 4 Step Tension Headache Process





# TENSION-TYPE HEADACHE

- **Tension-type headache** is characterized by episodes of stable bilateral pain lasting several days at a time.
- It is distinguished from migraine headache by its generally longer duration, the **lack of pulsating quality of the pain**, the lack of worsening with physical activity, and the **absence of GI concomitants**.
- However, migraine and tension-type headache may often coexist, either simultaneously or alternating over time.



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR TENSION-TYPE HEADACHE

- Frequent episodic tension-type headache
  - A. At least 10 episodes occurring on greater than or equal to one but less than 15 days per month for at least 3 months (greater than or equal to 12 and less than 180 days per year) and fulfilling criteria for B - D
  - B. Headache lasting from 30 minutes to 7 days
  - C. Headache has at least two of the following characteristics:
    - Bilateral location
    - Pressing/tightening (nonpulsating) quality
    - Mild or moderate intensity
    - Not aggravated by routine physical activity such as walking or climbing stairs



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR TENSION-TYPE HEADACHE

D. Both of the following:

- No nausea or vomiting (anorexia may occur)
- No more than one of photophobia or phonophobia

E. Not attributed to another disorder



# CHRONIC TENSION – TYPE HEADACHE

- A. Headache occurring on greater than or equal to 15 days per month on average for more than 3 months (greater than or equal to 180 days per year) and fulfilling criteria B–D
- B. Headache lasts hours and may be continuous
- C. Headache has at least two of the following characteristics:
  - Bilateral location
  - Pressing/tightening (non-pulsating) quality
  - Mild or moderate intensity
  - Not aggravated by routine physical activity such as walking or climbing stairs



# CHRONIC TENSION – TYPE HEADACHE

D. Both of the following:

- No more than one of photophobia, phonophobia or mild nausea
- Neither moderate or severe nausea nor vomiting

E. Not attributed to another disorder



# CLUSTER HEADACHE



# CLUSTER HEADACHE

- Cluster headache is a distinct syndrome characterized by frequent intense attacks (often several per day) over a 1- to 2-month period, separated by headache-free intervals for as long as 1 or 2 years.
- Cluster – “clustering in time,” with the headache bouts occurring every day to several times a day over a period of days to weeks, followed by a lengthy headache-free interval.
- Headache is generally retro-orbital in location and is accompanied by autonomic changes such as lacrimation, rhinorrhea, erythema of the eye, and agitation.



# CLUSTER HEADACHE

- Men tend to suffer more from cluster headache than women.
- Pain can be so intense that the sufferer may appear to be psychotic because of the screaming and thrashing that may be associated with the pain.
- Prior smoking and alcohol use have been associated with cluster headache, with alcohol often triggering the onset of the headache.





# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR CLUSTER HEADACHE AND CHRONIC PAROXYSMAL HEMICRANIA

- A. At least five attacks fulfilling criteria B - D
- B. Severe or very severe unilateral orbital, supraorbital and/or temporal pain lasting 15 - 180 minutes if untreated
- C. Headache is accompanied by at least one of the following:
  - Ipsilateral conjunctival injection and/or lacrimation
  - Ipsilateral nasal congestion and/or rhinorrhoea
  - Ipsilateral eyelid oedema
  - Ipsilateral forehead and facial sweating
  - Ipsilateral miosis and/or ptosis
  - A sense of restlessness or agitation
- D. Attacks have a frequency from one every other day to 8 per day
- E. Not attributed to another disorder



# HEADACHE ATTRIBUTABLE TO HEAD OR NECK TRAUMA

- Key symptoms include a headache following head trauma accompanied by a loss of consciousness, posttraumatic amnesia, and abnormal laboratory tests.
- Posttraumatic headache is variable in symptom presentation, severity, and duration.
- Major hypotheses include Cerebral edema, cortical spreading depression, innate vulnerability to cerebral vasospasm, and transient elevation of intracranial pressure.



# HEADACHE ATTRIBUTABLE TO HEAD OR NECK TRAUMA

- No direct relationship between the prevalence or chronicity of posttraumatic headache, and several indicators of severity of head Injury—
- including duration of unconsciousness, posttraumatic amnesia, electroencephalographic abnormalities, presence of skull fracture, or the presence of blood in the cerebrospinal fluid (CSF)
- Posttraumatic headache is more common after injuries that do not result in skull fracture.



# INTERNATIONAL HEADACHE SOCIETY-II (IHS-II) CRITERIA FOR HEADACHE ATTRIBUTED TO HEAD OR NECK TRAUMA

- A. Headache, no typical characteristics known, fulfil criteria C and D
- B. Head trauma with at least one of the following:
  - Loss of consciousness for greater than 30 minutes
  - Glasgow Coma Scale less than 13
  - Posttraumatic amnesia for greater than 48 hours
  - Imaging demonstration of a traumatic brain lesion (cerebral hematoma, intracerebral and/or subachnoid haemorrhage, brain contusion and/or skull fracture)
- C. Headache develops within 7 days after head trauma or after regaining consciousness following head trauma
- D. Headache persists for more than 3 months after head trauma



# EPIDEMIOLOGY AND COURSE

- International population-based studies of headache and specific headache subtypes show that approximately 50 % of persons in the general population suffer from headaches during any given year
- More than 90 % report a lifetime history of headaches.
- About half of those who report headaches suffer from tension-type headache.
- Most individuals in the general community, headaches are transient; a minority suffer from chronic headache (i.e., 3 %).



# EPIDEMIOLOGY AND COURSE

- Average lifetime prevalence of **migraine** is **18.5 %**, and the estimated average past year prevalence is **13.7 %**.
- Twofold greater prevalence of **migraine** across the lifespan in women, whereas there is an equal sex ratio of **tension-type headache**.
- Incidence of migraine is low before adolescence, when it rises rapidly until middle adulthood and then levels off in later life.
- Onset of migraine may occur in childhood when boys and girls are equally likely to suffer from migraine headache.



# EPIDEMIOLOGY AND COURSE

- Migraine in childhood– associated with GI complaints, particularly episodic bouts of stomach pain, vomiting, or diarrhea, and the duration is shorter than that commonly observed in adults.
- In women, migraine is strongly associated with reproductive system function, with increased incidence during puberty, and the first trimester of pregnancy, and is associated with exogenous hormone use.
- After menopause, the frequency of migraine attacks generally decreases dramatically, unless estrogen replacement therapy is administered.



# EPIDEMIOLOGY AND COURSE

- Aside from sex and age, a family history of migraine is one of the most potent and consistent risk factors for migraine
- Migraine is strongly associated with a variety of medical disorders, especially asthma, eczema, allergies, epilepsy, and cardiovascular disease, cerebrovascular disease, and particularly ischemic stroke.
- Anxiety and mood disorders are strongly associated with migraine.





# EPIDEMIOLOGY AND COURSE

- Course of migraine is highly variable.
- Frequency and duration of migraine decrease at midlife in both men and women and the symptomatic manifestations may change substantially over time
- Prevalence of **tension-type headache** is greater in **women**, but the gender difference is far less pronounced than that of migraine.



# EPIDEMIOLOGY AND COURSE

- **Tension-type headache** is most common in young adults, there is a less steep decrement in prevalence with age.
- **Posttraumatic headache** is quite rare in the general population (i.e., about 1 % lifetime prevalence).
- Lack of systematic data on **posttraumatic headache** in population-based samples.
- Based on retrospective reports of those who suffer from a serious head injury, the prevalence of severe and chronic headache ranges from **28 to 62 %**.
- Children and young adults appear to be particularly susceptible to the development of headache after head trauma.



# EPIDEMIOLOGY AND COURSE

- Cluster headache is very low (less than 1 % of the general population) and occurs nearly exclusively in men.
- Age at onset of cluster headache is somewhat later than that of migraine and tension-type headache; –
- the first attack of cluster usually begins in the late 20s or 30s and may recur intermittently throughout life.
- Risk factors include smoking and heavy alcohol use.
- Some family study and twin research demonstrating the role of genetic factors underlying the etiology of cluster headache.



# ETIOLOGY

- Etiology of the major types of headaches is still **unknown**,
- Recent advances in brain imaging have advanced the understanding of the pathogenesis of migraine.
- Most theories of migraine focus on activation of **the trigemino-vascular system** and its central projections.
- **Functional imaging** studies have shown that migraine is associated with **brainstem activation**, particularly the **dorsolateral pons**.
- Associated neurologic symptoms are the human homolog of cortical spreading depression.



# ETIOLOGY

- DTI studies demonstrate abnormalities in primary and modulatory components of the central nociceptive pathways such as the [periaqueductal gray](#), an important central modulatory component of the pain pathway,
- [Somatosensory cortex](#),
- [Occipital lobe](#) in subjects with migraine with aura.



# ETIOLOGY

- **Psychophysiological studies** have also contributed to a better understanding of mechanisms underlying migraine pathogenesis.
- In particular interictal abnormalities of evoked and event-related potentials have been reported for different cortical areas in migraineurs such as the sensory cortices.
- Several studies suggest that the **excitability of neurons in the visual cortex** plays a fundamental role in the brain's susceptibility to migraine attacks.



# ETIOLOGY

- **Cluster headache** posit that hypothalamic and central pain control regions can trigger a cascade of events in the brainstem, comprising afferent pain and efferent parasympathetic pathways.
- PET has shown **vasodilatation** of the **major basal arteries** during **the acute pain attack in cluster headache**,
- It demonstration of activation of neuronal vasodilator mechanisms in humans
- Less is known about the etiology of tension-type headache.
- Tension-type headache is a misnomer, since there is no evidence that muscle tension is the underlying cause of this headache subtype



# PSYCHIATRIC CONDITIONS ASSOCIATED WITH HEADACHE

## Depression

- Most common psychiatric disorder associated with headache is depression.
- Neurovegetative signs in chronic pain are similar to those in depression: irritability, sleep disturbance, appetite changes, social withdrawal, and somatic preoccupation.
- Major affective disorder can coexist with headache, the most common type of depression seen in chronic headache is a milder dysthymia with anxiety, discouragement, frustration, irritability, and pervasive concerns that the pain will never stop.





# PSYCHIATRIC CONDITIONS ASSOCIATED WITH HEADACHE

- One study showed 78% of these individuals with chronic migraine have psychiatric disorders.
- Disorders were major depression in 57% of cases,
- Dysthymia in 11% of cases, panic disorder in 30% of cases, and generalized anxiety in 8% of cases.
- Depression and anxiety disorders were more frequently in female
- However, there was no increased risk of generalized anxiety disorder in this group

Juang K, Wang S, Fuh J, et al. Comorbidity of depressive and anxiety disorder I chronic daily headache and its subtypes. Headache 2000;40:818 - 23



# PSYCHIATRIC CONDITIONS ASSOCIATED WITH HEADACHE

- Tension-type headaches do not suffer from this increased risk of depression when compared with controls
- Chronic daily headache the risk of major depression and panic disorder is 1.5 to 2 times more likely in women, compared with the general population.
- Bipolar disorder is another significant psychiatric condition comorbid with migraine.
- Lifetime prevalence of migraine in these individuals of 40% (44% in women and 31% in men).
- This relationship is particularly prominent with individuals with bipolar II disorder, who have a migraine prevalence of 65% (75% in women and 40% in men).



# ANXIETY

- Anxiety is probably as common as depression in pain patients.
- [Panic and phobic disorders](#) can coexist with headache.
- Most common form of anxiety is a worried, apprehensive state that is frequently found in depressive conditions.
- Anxiety is often focused on the pain (the patient expects pain, watches the pain, and is discouraged by the return of pain).
- Such anxiety is increased when the pain persists for longer and longer periods.



# MIGRAINE AND STRESS

- Three-quarters of migraineurs report that there were triggers of their attacks, with 80% stating that stress is a major trigger.
- Concept of stress is often ambiguous.
- Cause is internal or external, can be a significant stressor to individuals.
- Stress of the headache disorder itself is often significant.
- Often the headache occurs, not at the height of the stress, but when the stressor is withdrawn.
- Stress is often protective for the development of attacks.
- There is evidence that stress can produce analgesia

Bodner RJ. Neuropharmacological and neuroendocrine substrates of stress-induced analgesia. *Ann N Y Acad Sci* 1986;467:345 - 60.

Terman CW, Liebeskind JC. Relation of stress-induced analgesia to stimulation-produced analgesia. *Ann N Y Acad Sci* 1986;467:345 - 60.



# SOMATIFORM DISORDERS

- Headache may appear as a conversion disorder (a hysterical symptom) or as a somatization disorder.
- In both cases, it is seldom the only symptom.
- Conversion disorder, the presentation of the symptoms is dramatic and does not follow the usual picture of migraine or muscle contraction headache, and one can expect to find some significant upheavals in that person's life.
- Conversion headache will usually have a payoff, i.e., it will help solve a problem in the patient's life.



# SOMATIFORM DISORDERS

- Somatization disorders display many somatic complaints attributable to various organ systems.
- Such patients usually have been treated for a half-dozen illnesses of different systems, sometimes with multiple surgeries.
- They are chronic patients for whom, in the long run, treatment will not be overly successful.



# MIGRAINE AND BORDERLINE PERSONALITY DISORDER

- Incidence of BPD in the general population is 2%, but in the headache population, particularly in those with comorbid psychopathology and medication overuse, the incidence is higher.

Swartz M, Blazer D, George L, et al. Estimating the prevalence of borderline personality disorder in the community. *J Pers Disord* 1990;4:257 - 72.

Widiger T, Weissman M. Epidemiology of borderline personality disorder. *Hosp Community Psychiatry* 1991;42:257 - 72.



# MIGRAINE AND PSYCHOSIS

- Psychotic disorders are also comorbid with headache syndromes.
- Schizophrenia has been associated with a low incidence of headache, as well as other pain disorders.
- Such individuals often have an impaired awareness of somatic events in general as well as a blunted affective response to pain.
- Kuritzky and colleagues and Ayata and colleagues have disputed this and reported that schizophrenics had more complaints of more frequent headaches and headaches of longer duration than controls.

Kuritzky A, Mazeh D, Levi A. Headache in schizophrenic patients: a controlled study. *Cephalalgia* 1999;19:725 - 7.

Ayata C, Jin H, Kudo C, et al. Suppression of cortical spreading depression in migraine prophylaxis. *Ann Neurol* 2006;59:652 - 61.





# DEPENDENCY AND WITHDRAWAL

- It is not uncommon for headache patients to become dependent on medication.
- Most common medications involved are opioids, barbital, benzodiazepines, ergot derivatives, and nonsteroidal anti-inflammatory drugs.
- All these drugs are used in the treatment of pain.
- Dependency does not follow a pattern of substance abuse



# DEPENDENCY AND WITHDRAWAL

- Withdrawal symptom that appears in these patients is primarily a return of pain that had been masked by the medication.
- Medication-dependent patient has a daily or several-times-daily headache and follows a pattern of daily medication use with gradually increasing doses as tolerance grows.
- Reduction of intake produces withdrawal (increased headache)



# DIAGNOSIS AND CLINICAL EVALUATION

- Very skillful work-up is essential because headache is such a nonspecific complaint with an enormous number of etiologies, ranging from the trivial to the acutely life-threatening
- Following factors are important to determine in order to define whether the headache is migrainous



# DIAGNOSIS AND CLINICAL EVALUATION

- Onset
- Frequency
- Timing
- location
- Duration
- Quality
- Severity
- Precipitants
- Precursors
- Triggers
- Phenomena that worsen or relieve the pain
- Warning signs
- Prodromal events
- Specific symptoms including visual changes, GI symptoms, or neurologic symptoms
- Sensitivity to light, noise, sounds, or touch
- Mood changes; and
- Cognitive changes



# DIAGNOSIS AND CLINICAL EVALUATION

- In addition, it is important to obtain a detailed family history, description of course, and a history of previous evaluation and treatment.
- Differential diagnosis of headache is based on a neurological examination to rule out pathognomonic signs that might indicate other brain disorders



# DIAGNOSIS AND CLINICAL EVALUATION

## Headache Symptoms Indicating Further Diagnostic Work-Up

- First headache
- Worst headache
- Gradual worsening over days or weeks
- Vomiting prior to headache onset
- Abnormal neurologic examination
- Ongoing systemic illness
- Onset after age 50
- Accompanied by fever
- Occurs during sleep



# DIAGNOSIS AND CLINICAL EVALUATION

## ■ INVESTIGATIONS

- **Blood Chemistry and Urinalysis.**
- These tests may determine many medical conditions, including diabetes, thyroid problems, and infections, which can cause headaches.
- CT scan is indicated to rule out acute hemorrhage, while magnetic resonance imaging
- MRI is indicated when hydrocephalus, brain tumor, sinusitis, vasculitis, or posterior fossa lesions are suspected.
- X-rays of the jaw and cervical spine are useful to rule out malocclusions and degenerative changes of arthritis.



# TREATMENT OF HEADACHE SYNDROMES

- Mainstay of migraine treatment is pharmacologic intervention.
- Treatment of migraine is divided into medications that prevent future attacks (prophylactic treatment), and interventions in the acute attack that provide symptom relief (acute treatment).
- Major classes of drugs that have been investigated in the prophylaxis of migraine include the  $\beta$ -adrenergic blocking agents, antidepressants, anticonvulsants, calcium channel blockers, and aspirin.





# TREATMENT OF HEADACHE SYNDROMES

## Prophylactic Treatment of Migraine

FIRST LINE	SECOND LINE
<ul style="list-style-type: none"><li>• Propranolol 40–120 mg</li></ul>	<ul style="list-style-type: none"><li>• Flunarizine 5–10 mg</li></ul>
<ul style="list-style-type: none"><li>• Metoprolol 25–100 mg</li></ul>	<ul style="list-style-type: none"><li>• Methysergide 1–6 mg</li></ul>
<ul style="list-style-type: none"><li>• Amitriptyline 25–100 mg</li></ul>	<ul style="list-style-type: none"><li>• Sodium valproate 500–1500 mg</li></ul>
<ul style="list-style-type: none"><li>• Timolol 20–60 mg</li></ul>	<ul style="list-style-type: none"><li>• Aspirin 325 mg</li></ul>



# TREATMENT

- $\beta$ -blockers have been the most widely prescribed class of drugs for migraine prophylaxis.
- Few side effects and may also treat comorbid cardiovascular diseases in people who suffer from migraine.
- Clinicians should be particularly cautious in prescribing this class of drugs to individuals with a history of depression, since the  $\beta$ -blockers are associated with the development of anhedonia, irritability, and lassitude, which may occur after many months on any of these agents.
- In contrast, patients with high levels of autonomic anxiety may actually benefit from this class of drugs.



# TREATMENT

- TCA have been well established as prophylactic agents for migraine.
- **Amitriptyline** is the only tricyclic agent that has been systematically studied in several controlled studies.
- Its major side effects of sedation and weight gain are often not well tolerated in migraine patients.
- **Nortriptyline and desipramine** appear to be efficacious in the treatment of depression, but have fewer side effects than do the parent tertiary amines (e.g., amitriptyline, imipramine).
- **SSRIs** do not have demonstrated efficacy in migraine.
- Many patients complain of headache as a secondary effect of the latter class of drugs



# TREATMENT

- MAOIs have also been reported to be efficacious in the treatment of migraine headache, particularly in patients who have been unresponsive to first-line prophylactic treatment.
- Phenzamine has been considered to be one of the most efficacious antimigraine agents, but there are no controlled trials of this class of drugs in migraine prevention.
- Clinicians have generally been reluctant to prescribe MAOIs because of the possibility of a hypertensive reaction to dietary tyramine and the other side effects of these agents (i.e., orthostatic hypotension, weight gain, and excessive stimulation)
- Use of oral calcium channel blockers to treat the hypertensive crisis associated with MAOIs may reduce clinicians' reservations about prescribing these agents.



# TREATMENT

- Use of **antiepileptic agents** in migraine prevention.
- **Valproate** which is currently a **first-line treatment** for **bipolar affective disorder**, can also be used to treat both migraine and mood disorders.
- **Topiramate** is another antiepileptic agent that has been evaluated in the treatment of migraine.
- At this point, there is insufficient evidence for its efficacy in migraine.



# NONPHARMACOLOGIC TREATMENT OF MIGRAINE

- Behavioral approaches, such as [relaxation techniques](#), and [cognitive-behavioral therapy](#), require far more specialist time or technical devices, but are supported by some evidence, which is mostly old.
- New approach in migraine prevention is [aerobic exercise](#)
- Evidence pertaining to the efficacy of [acupuncture](#) is [controversial](#) because of methodologic difficulties, but an ongoing large German study may provide valuable evidence in the near future.
- [Nutritional supplements](#) acting on mitochondrial metabolism, such as [magnesium](#), [riboflavin](#), were shown to be effective in small, randomized, controlled trials.



# TREATMENT

## Symptomatic Relief

- NSAIDS – ibuprofen, naproxen sodium and indomethacin, and the analgesics acetylsalicylic acid and acetaminophen are commonly used as the first-line treatment of mild-to-moderate migraine.
- Acetaminophen-aspirin-caffeine formulation of Excedrin was recently approved for labeling for the indication of migraine, as were the ibuprofen drugs.
- Other classes of drugs that are commonly prescribed for more severe attacks include ergot derivatives



# TREATMENT

- Ergotamine tartrate and dihydroergotamine are two of the most commonly prescribed ergot derivatives for moderate to severe attacks of migraine.
- In order to counterbalance the common side effect of nausea, metoclopramide or prochlorperazine is recommended.
- Combination agents generally comprised of barbiturates, analgesics, and caffeine are also highly effective in the treatment of migraine episodes





# TREATMENT

- Acute Treatment of Migraine

5-HT 1B/1D AGONISTS	NSAIDS
Sumatriptan subcutaneous 6mg	Aspirin 325mg
Sumatriptan 50mg	
Rizatriptan 10mg	
Eletriptan 80mg	
Almotriptan 12.5mg	



# TENSION-TYPE HEADACHE TREATMENT

- Ibuprofen (800 mg), which is associated with the lowest risk of GI bleeding or perforation, first choice for acute treatment of tension-type headache followed by naproxen sodium (825 mg), which has a higher risk of GI bleed .
- Aspirin (500 or 1,000 mg) and various NSAIDS are more effective than placebo in aborting tension headaches
- Treatments for chronic tension - type headache include tricyclic antidepressants as first-line treatments.
- 10 to 25 mg amitriptyline or clomipramine before bed and increased gradually. Average required dose of amitriptyline for patients with chronic tension - type headache 50 to 75 mg per day.



# CLUSTER HEADACHE TREATMENT

- Prophylactic medicine is almost always indicated for treating cluster headache because of the extreme severity of pain induced by an acute attack, which often occurs at night.
- Inhaled oxygen, narcotics, self-injected dihydroergotamine and triptans are the most commonly used agents for the treatment of acute attacks.
- Medications that have been shown to be effective in preventing attacks of cluster headache are [lithium](#) the [corticosteroids](#), [methysergide](#), the [calcium channel blockers](#),  $\beta$ -blockers, and [valproic acid](#).
- Side effects can be severe, and combinations of these agents are often necessary to achieve success.
- Some may benefit from adjuvant topiramate.



# CONCLUSION

- **Headache** is the symptom of pain anywhere in the region of the head or neck.
- International Headache Society-II has classified headaches into primary headache, secondary headache and headaches attributed to cranial neuralgias, central and other facial pain and other headaches
- Primary headaches- migraine, tension-type headache, cluster and other trigeminal autonomic cephalgias other primary headache
- Depression and Anxiety are the most common psychiatric comorbidity in headache.
- Detail clinical and neuropsychiatric evaluation is required for all patients presenting with headache complaints



# REFERENCES

- Kaplan & Sadock' s comprehensive textbook of psychiatry, 9th edition
- Headaches: Psychiatric Aspects Mark W. Green, MD
- **Psychiatric Aspects of Headache** Bernard H. Shulman, MD\*
- Sandor PS, Áfra J. Nonpharmacologic treatment of migraine. Current pain and headache reports. 2005 Jun 1;9(3):202-5.



# Headaches

**Sinus:**  
pain is usually  
behind the  
forehead and /or  
cheekbones



**Cluster:**  
pain is in and  
around one eye



**Tension:**  
pain is like a  
band squeezing  
the head



**Migraine:**  
pain, nausea and  
visual changes  
are typical of  
classic form



THANK YOU

