

TOPICS FOR TODAY.....

- Introduction
- Prevalence
- Burden due to headache
- Causes for sensing headache
- Path physiology
- Classification
- Diagnosis
- Management



INTRODUCTION



- Most common of all human physical complaints
- Despite regional variations, headache disorders are a worldwide problem, affecting people of all ages, races, income levels, & geographical area
- Headache is a painful and disabling feature , and are the most common disorder of the nervous system

PREVALENCE

- 90% of population in the world experiences headache in any given year.
- Prevalence among adults of current headache disorder is 47%
- More than 10% of the reported headache were Migraine
- 1.7-4% of world's adult population experiences headache on 15 or more days every month

BURDEN DUE TO HEADACHE

- It is not only painful, but also disabling
- Substantial personal suffering
- Impaired quality of life
- Financial cost
- Repeated headache attacks with a constant fear of next one
- Damages family life, social life, employment
- Long term effort to cope with chronic headache will predispose individual to other illnesses (depression)



CAUSES FOR SENSING HEADACHE

- Traction
- Pressure
- Deformation
- Displacement
- Inflammation
- Dilatation

Of the structures which has nociceptors

PATH PHYSIOLOGY

- The brain tissue itself is not sensitive to pain as it lacks pain receptors
- But the pain-sensitive structures that are around the brain causes the sensation of pain
 - Extra cranial: skin, s/c tissue, muscles, fascia, periosteum, part of eye, ears, nasal cavities, & paranasal sinuses
 - Intracranial venous sinuses and large related vessels
 - Meninges and the arteries surrounding it
 - Cranial and cervical nerves

PATH PHYSIOLOGY contd.....



Causative factor



Stimulation of nociceptors



Transmission of pain
impulse by small myelinated
fibers

contd.....



Fibers are terminated in dorsal horn of spinal cord



Dorsal horn initiates secondary neurons



Secondary neurons reaches the thalamus through spinal thalamic pathway.

CLASSIFICATION

PRIMARY HEADACHE

- Migraine
- Tension-type headache
- Cluster headache
- Exertion headache

SECONDARY HEADACHE

Headache attributed to....

- Head & neck trauma
- Cranial or cervical vascular disorders
- Nonvascular intracranial disorder
- Substance use or its withdrawal
- Infections
- Disorders of cranial & facial structures

TYPES OF HEADACHES

Sinus:

pain is usually behind the forehead and/or cheekbones



Cluster:

pain is in and around one eye



Tension:

pain is like a hand squeezing the head



Migraine:

pain, nausea & visual changes are typical of classic form



Headache Type	Typical Age of onset	Usual Location	Duration	Frequency/ Timing	Severity	Quality	Associated Features
Migraine	5 - 40	One sided, around the temple	Several hours to 3 days	varies	Moderate to very severe	Throbbing, pulsing, strong steady ache	Light/sound sensitivity, nausea, vomiting, visual disturbances 'blind spot'
Tension Type	10 - 50	Both sides of the head or the whole head	30 minutes to up to 7 days or more	varies	dull to moderate ache, may vary through the duration of the headache	tight pressure around the head 'vice like'	tight or sore shoulder muscles
Cluster Headache	15 - 40	One sided, around or behind the eye	30 mins to 2 hours	1 - 8 times a day, usually at night	very very severe	Boring, stabbing, piercing	facial sweating, ones sided tearing, nasal congestion
Cervicogenic	Varies	Base of the neck, side of the head or behind the eye	1 to 6 hours	daily	Moderate to severe	dull ache to severe	neck pain, occasional nausea

MIGRAINE

- Common, recurring, disabling primary headache
- Has two major clinical presentation
 - With aura
 - Without aura
- More common in women
- Lasts for 4-72 hrs



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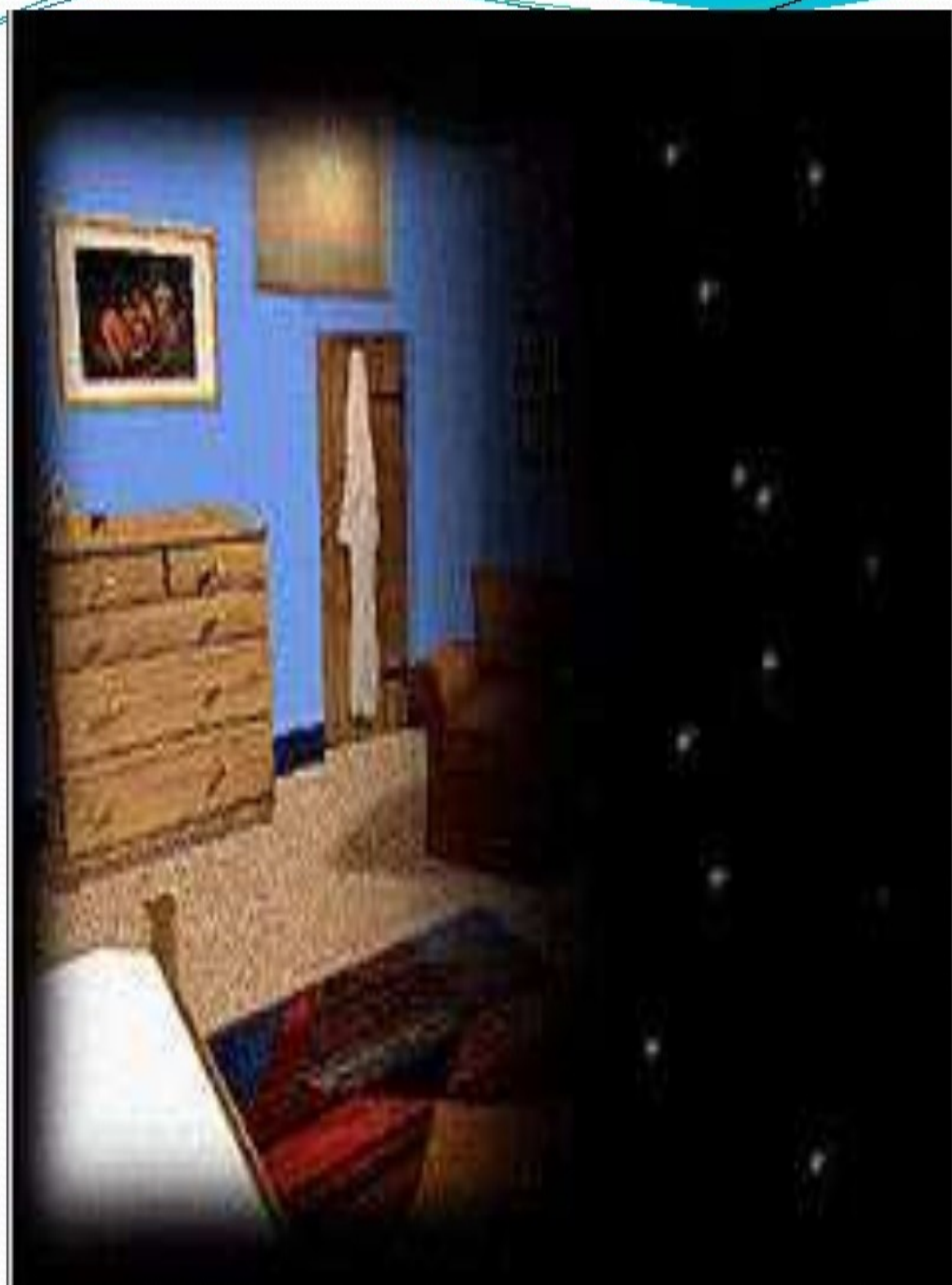
- A clear biological disorder
 - Like asthma, diabetes, or hypertension
- A disorder of the central nervous system
 - Hypersensitive to specific triggers and stimuli
 - Often a family/genetic connection
- A disorder of nerve cells in the brain and the blood vessels surrounding the outside of the brain



There are several types of migraine headache, but most are characterized by severe pain on one or both sides of the head (which may move to the other side), nausea, dizziness and visual disturbances caused by dilation and constriction of the blood vessels in the head

Migraine..features.

- Frequency 1-2/year- 2-3/week
- Pain moderate - severe
pulsating, throbbing
- Duration 4 hrs - 3 days
- Location usually one sided (but side changes between attacks)
- symptoms' aura, nausea, vomiting
sensitive to light, sound, smell





Triggers that may precipitate Migraine

FOOD & BEVERAGES:

- Caffeine
- Alcoholic beverages
- Chocolate
- Yeast products
- Dairy products
- Nitrites
- Strong and aged cheeses
- Pickled food

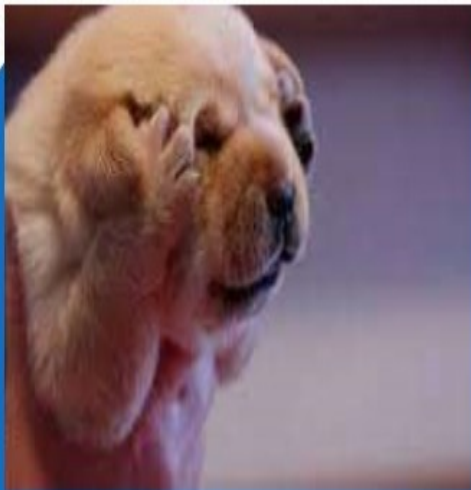
OTHER CONDITIONS:

- Stress
- ✱ hormonal changes
- ✱ certain drugs
- ✱ bright light
- ✱ weather changes

PHASES of migraine



- Premonitory symptoms
- aura



- The headache phase
- Post monitory symptoms

Migraine Symptoms and Stages

Stage 1

(Prodrome): Prodrome symptoms may occur days before actual pain hits. Roughly half of all migraine sufferers experience this stage, which is characterized by symptoms of light and sound sensitivity, depression, irritability and lack of appetite.

Stage 2

(Aura): Auras usually occur up to one hour prior to the headache. Twenty percent of migraine sufferers experience migraine aura, a phase characterized by changes in visual perception. Symptoms of aura include seeing flashing lights, geometric patterns that obscure vision, or even the temporary loss of half of the visual range.

Stage 3

(Headache): Headache pain can be moderate to severe, lasting up to three days. Migraine pain may start on one or both sides of the head. Other symptoms may include intolerance of light and noise, nausea and vomiting, sensitivity to movement and speech difficulties.

Stage 4

(Postdrome): Symptoms can last several days after the headache, and have been described as a "migraine hangover." Most migraine sufferers may be irritable and fatigued. They may have difficulty concentrating, and experience mood changes. The scalp may also be very tender.



TENSION HEADACHE

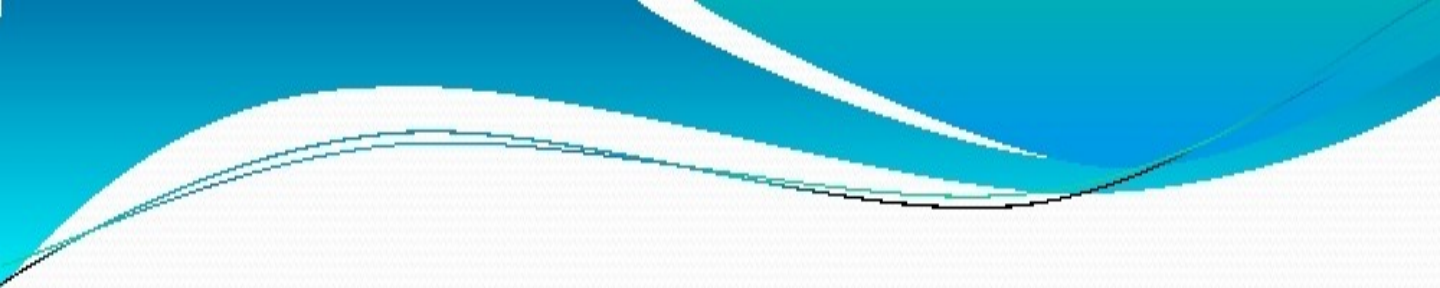
- Frequency
chronic
often daily
- Pain
mild-moderate
pressure, tightness
- Duration
30 mins - 7 days
- Location
both sides
whole head and neck
- Symptoms
no light / sound sensitivity
no aura

CLUSTER HEADACHE

- Frequency clusters – every time each year or season;
 then free
- Pain eexcruciating
 ppenetrating, boring
 continuous, non-throbbing
- Duration 15mins-3 hrs; same clock time each day
 (2am); several episodes / day
- Location ALWAYS the same side
- Symptoms watering eyes, miosis, ptosis,
 nasal congestion, runny nose
 red eye, swollen eyelids
 sweating

DIAGNOSIS

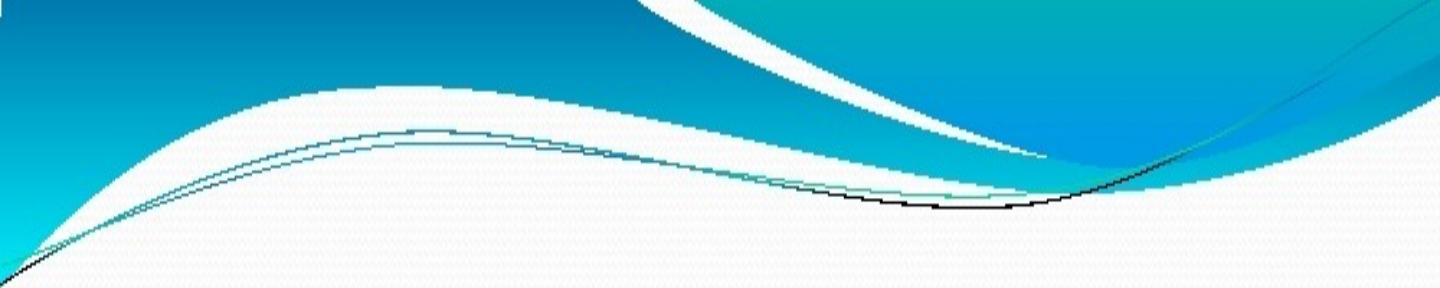
- Entirely related to patients history
- If dangerous symptoms, neuroimaging studies will be performed
- Neurological assessment



MANAGEMENT

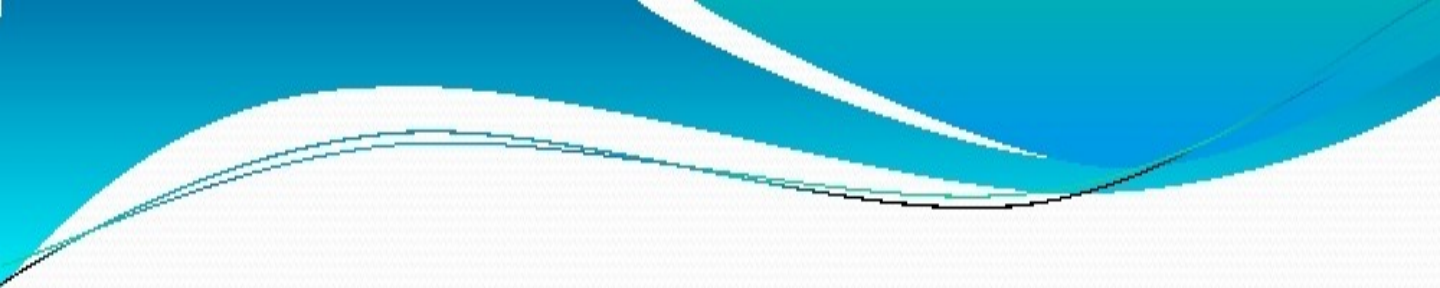
Main part include:-

- Analgesics
- Anti-emetics
- Anti-migraine medicine
- Prophylactic medication



Migraine:-

- Preventive medications are generally recommended when people have more than 4 attacks per month
- Possible therapies include B blockers, antidepressants, anticonvulsants and NSAIDs



TENSION HEADACHE

- This can usually be managed with NSAID, Acetaminophen, Aspirin
- Amitryptilin is a medication proven to help chronic tension headache

NEW TREND IN MANAGING

HEADACHE

- **Biofeedback**- electronic sensors, monitor muscle tension, temp, heart rate, blood pressure, to teach people how to control bodily response
- **Massage** : for temp relief, try rubbing your temples or neck, back, head or shoulder massage
- **Stretching** : neck ROM-chin forward, upward, & towards each shoulder. Shoulder shrugs(up, dwn, forward & backward.

Managing headache...contd....

- **Aerobics** – regular brisk walking, biking or swimming
- **Meditation** – focus attention & quiet mind from distraction
- **Yoga** – balances mind, body, spirit
- **Relaxation** – deep breathing, relaxing to music, guided imagery
- **Heat & cold-**
- **Avoid nitrates and nitrites**

Managing headache contd...

- **Botox** – wrinkle reducer, given around the head & neck every 12 weeks
- **Transcranial magnetic stimulation**- delivering magnetic pulses to brain.
- **Electrode implants**- electrodes are placed in neck or brain

SIPPING WATER IS THE NEW REMEDY



THE next time you have a headache ditch that painkiller and go for a simple remedy: just drink a glass of water. Regularly sipping water can reduce the severity of headaches and migraine, and reduce the need for tablets, says a new study done by researchers from the University of Maastricht, the Netherlands.



THANK YOU

