MANAGAMENT OF MIGRAINE

Migraine Facts

- Migraine is one of the common causes of recurrent headaches
- Migraine constitutes 16% of primary headaches
- Migraine afflicts 10-20% of the general population
- More than 2/3 of migraine sufferers either have never consulted a doctor or have stopped doing so
- Migraine is underdiagnosed and undertreated
- Migraine greatly affects quality of life. The WHO ranks migraine among the world's most disabling medical illnesses

Migraine - Definition

"Migraine is a familial disorder characterized by recurrent attacks of headache widely variable in intensity, frequency and duration. Attacks are commonly unilateral and are usually associated with anorexia, nausea and vomiting"

-World Federation of Neurology

Migraine Triggers

- Food
- Disturbed sleep pattern
- Hormonal changes
- Drugs
- Physical exertion
- Visual stimuli
- Auditory stimuli
- Olfactory stimuli
- Weather changes
- Hunger
- Psychological factors

Phases of Acute Migraine

- Prodrome
- Aura
- Headache
- Postdrome

PRODROME

- Vague premonitory symptoms that begin from 12 to 36 hours before the aura and headache
- Symptoms include
  - Yawning
  - Excitation
  - Depression
  - Lethargy
  - Craving or distaste for various foods

Duration – 15 to 20 min

AURA

Aura is a warning or signal before onset of headache

Symptoms

- Flashing of lights
- Zig-zag lines
- Difficulty in focussing

Duration : 15-30 min

HEADACHE

- Headache is generally unilateral and is associated with symptoms like:
  - ✓ Anorexia
  - ✓ Nausea
  - ✓ Vomiting
  - ✓ Photophobia
  - ✓ Phonophobia
  - ✓ Tinnitus
- Duration is 4-72 hrs

POSTDROME (RESOLUTION PHASE)

Following headache, patient complains of

- Fatigue
- Depression
- Severe exhaustion
- Some patients feel unusually fresh

Duration: Few hours or up to 2 days

MIGRAINE – CLASSIFICATION

According to Headache Classification Committee of the International Headache Society, Migraine has been classified as:

- Migraine without aura (common migraine)
- Migraine with aura (classic migraine)
- Complicated migraine

MIGRAINE: CLINICAL FEATURES

Migraine Without Aura	Migraine With Aura
No aura or Prodrome	**Aura or prodrome is present**
Unilateral throbbing headache may be accompanied by nausea and vomiting	Unilateral throbbing headache and later becomes generalised
During headache, patient complains of phonophobia and photophobia	Patient complains of visual disturbances and may have mood variations

MIGRAINE - PATHOPHYSIOLOGY

VASCULAR THEORY

- Intracerebral blood vessel vasoconstriction – aura
- Intracranial/Extracranial blood vessel vasodilation – headache

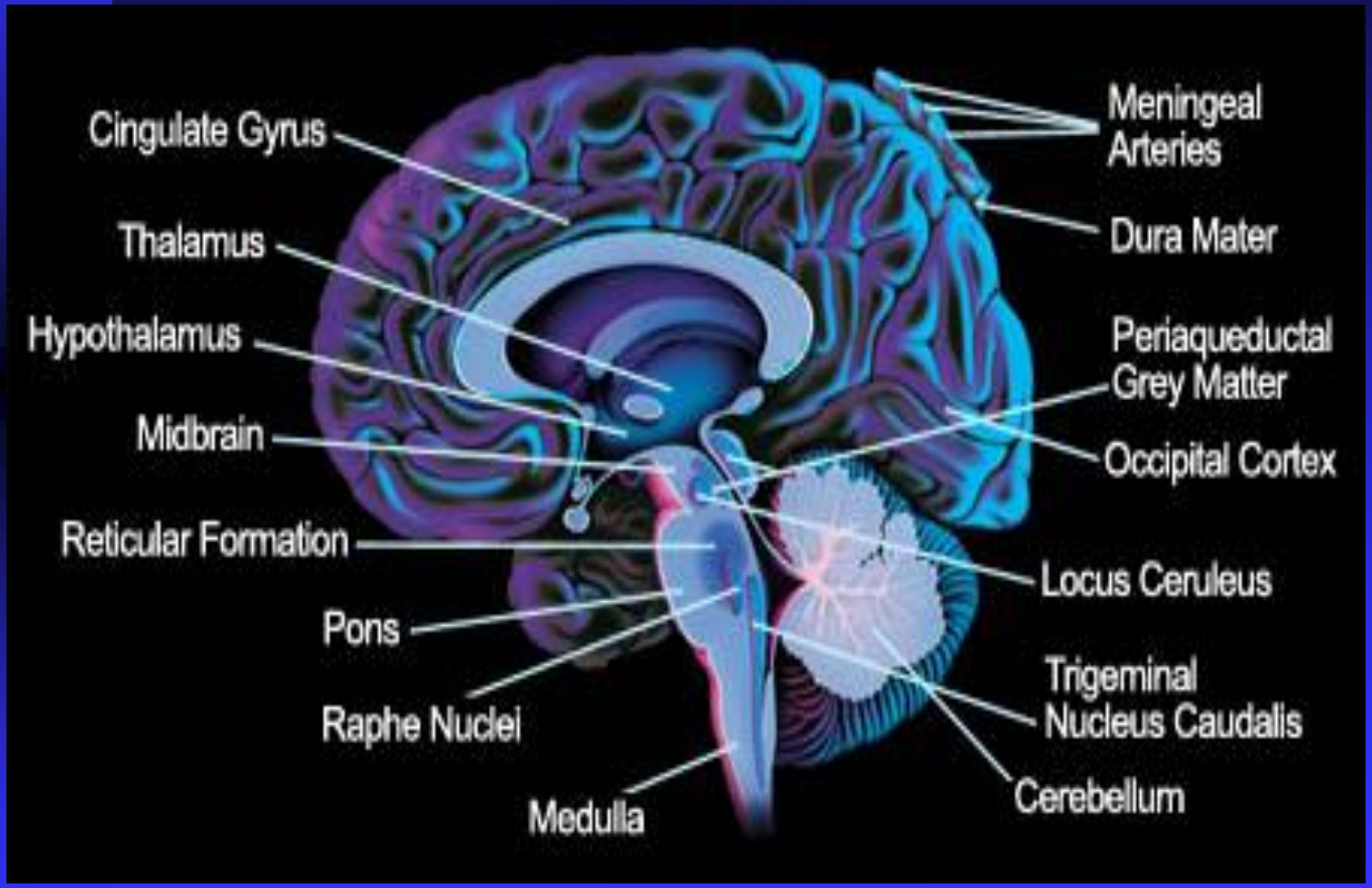
SEROTONIN THEORY

- Decreased serotonin levels linked to migraine
- Specific serotonin receptors found in blood vessels of brain

PRESENT UNDERSTANDING

Neurovascular process, in which neural events result in activation of blood vessels, which in turn results in pain and further nerve activation

NEUROVASCULAR PROCESS



Arterial
Activation

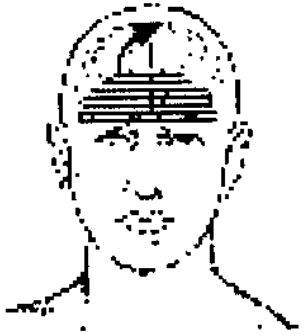
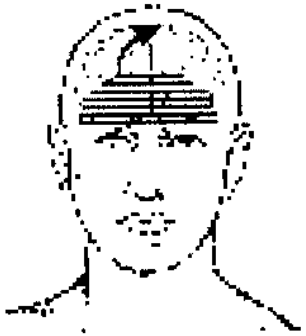
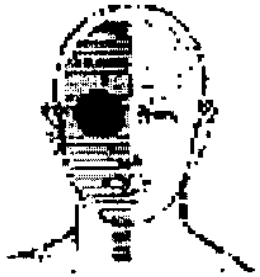
Release of
Neurotransmitter

Worsening of Pain

MIGRAINE: DIAGNOSIS

- Medical History
- Headache diary
- Migraine triggers
- Investigations (only to exclude secondary causes)
  - ✓EEG
  - ✓CT Brain
  - ✓MRI

DIFFERENTIATING COMMON PRIMARY HEADACHES

Characteristic	Migraine without aura	Tension-type headaches	Cluster
Location and radiation of pain	 Usually unilateral	 Bilateral	 **Strictly unilateral**

Tension headaches: Do not have the associated features like nausea, vomiting, photophobia, phonophobia. The muscle contraction leads to headache. Headache quality is of a tightening (non-pulsating) quality. Usually bilateral. Intensity is mild or moderate

Cluster headaches: Severe unilateral pain. Headache associated with lacrimation, nasal congestion, rhinorrhea, facial sweating or eyelid edema. Pain lasts for 15 to 180 minutes. More common in men

THE TREATMENT APPROACH TO MIGRAINE

LONG-TERM TREATMENT GOALS FOR THE MIGRAINE SUFFERER

- Reducing the attack frequency and severity
- Avoiding escalation of headache medication
- Educating and enabling the patient to manage the disorder
- Improving the patient's quality of life

MIGRAINE MANAGEMENT

- **Non-pharmacological treatment**
  - Identification of triggers
  - Meditation
  - Relaxation training
  - Psychotherapy
- **Pharmacotherapy**
  - Abortive therapy
    - non-specific
    - specific
  - Preventive therapy

MIGRAINE: ABORTIVE THERAPY

Non-specific treatment

Drug	Dose	Route
Aspirin	500-650 mg	Oral
Paracetamol	500 mg-4 g	Oral
Ibuprofen	200- 300 mg	Oral
Diclofenac	50-100 mg	Oral/IM
Naproxen	500-750 mg	Oral

ABORTIVE THERAPY FOR MIGRAINE

Specific treatment

Drug	Dose	Route
Ergot alkaloids		
Ergotamine	1-2 mg/d; max-6 g/d	Oral
Dihydroergotamine	0.75-1 mg	SC
5-HT receptor agonists		
Sumatriptan	25-300 mg 6 mg	Orally SC
Rizatriptan	10 mg	Orally

ANTI-NAUSEANT DRUGS FOR MIGRAINE TREATMENT

Drug	Dose (mg)/d	Route
Domperidone	10-80 mg	Oral
Metoclopramide	5-10 mg	Oral/IV
Promethazine	50-125 mg	Oral/IM
Chlorpromazine	10-25 mg	Oral/IV

WHY THE NEED FOR PROPHYLAXIS ?

- Abortive drugs should not be used more than 2-3 times a week
- Long-term prophylaxis improves quality of life by reducing frequency and severity of attacks
- 80% of migraineurs may require prophylaxis

WHEN IS PROPHYLAXIS INDICATED?

According to the US Headache Consortium Guidelines, indications for preventive treatment include:

- Patients who have very frequent headaches (more than 2 per week)
- Attack duration is > 48 hours
- Headache severity is extreme
- Migraine attacks are accompanied by prolonged aura
- Unacceptable adverse effects occur with acute migraine treatment
- Contraindication to acute treatment
- Migraine substantially interferes with the patient's daily routine, despite acute treatment
- Special circumstances such as hemiplegic migraine or attacks with a risk of permanent neurologic injury
- Patient preference

PREVENTIVE THERAPY FOR MIGRAINE

Drugs	Dose (mg/d)
1. **Betablockers**	
◆ Propranolol	40-320
2. **Calcium Channel Blockers**	10-20
◆ Flunarizine	120-480
◆ Verapamil	
3. **TCAs**	
◆ Amitriptyline	10-20
4. **SSRIs**	
◆ Fluoxetine	20-60

PREVENTIVE THERAPY FOR MIGRAINE *(CONTD.)*

Drugs	Dose (mg/d)
5. Anti-convulsant ◆ Sodium valproate	600-1200
6. Anti-histaminic ◆ Cyproheptadine	4-8