



HEADACHE

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PREVENTION & TREATMENT





1 INTRODUCTION

Introduction

- Definition : A headache is a **pain** or discomfort in the head , scalp , or neck
 - One of the most common of all human physical complaints.
 - Headache is actually a **symptom** rather than a **disease** a stress response, vasodilation (migraine), skeletal muscle tension (tension headache), or a combination of factors.
- 

Worldwide problem

- Up to 25% of adults have a severe headache each year
- Up to 4% have daily or near-daily headache
- Lifetime prevalence: 90% or more
- Significant suffering and economic loss





2 TYPES



Classification

I. PRIMARY HEADACHE

- A headache that is not caused by another **underlying disease, trauma or medical condition.**
- Accounts for about **ninety percent** of all headaches.



Cont.

- **Intrinsic dysfunction** of the nervous system
- Most patients presenting with headache have primary headache syndromes
- **Episodic** (عرضي) headache: more common
- Chronic headache: attacks occurring more frequently than **15 days/month for more than 6 months**



II. SECONDARY HEADACHE

- <2% of headaches in primary care offices
- Caused by **exogenous disorders**:
 - Head trauma
 - Vascular disease
 - Neoplasms(الأورام)
 - Substance abuse or withdrawal
 - Infection/Inflammation
 - Metabolic disorders
 - others





3 PRIMARY HEADACHE SYNDROMES

➤ PRIMARY HEADACHE SYNDROMES

- Tension type headache
- Migraine
- Trigeminal Neuralgia التهاب العصب الثالث
- Cluster headache الصداع العنقودي
- Others



I- TENSION TYPE

- Most common-69%
- Episodic or chronic
- Primary disorder of CNS pain modulation
- seen equally in both sexes



➤ Precipitating factors

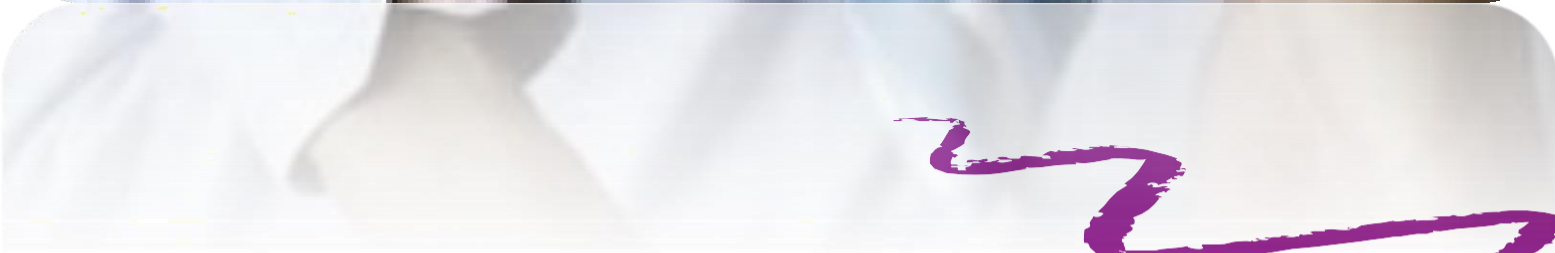
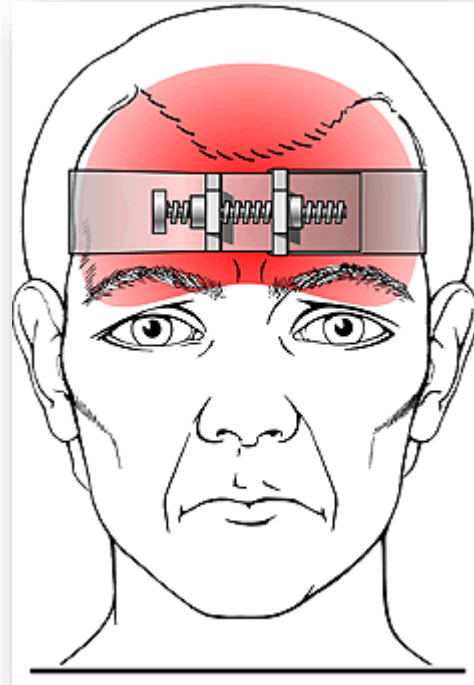
- **Stress:** usually occurs in the afternoon after long stressful work hours or after an exam
- **Sleep deprivation**
- **Uncomfortable stressful position**
- Irregular meal time (hunger)
- Eyestrain
- Caffeine withdrawal
- Dehydration



Symptoms & Signs

- **Gradual onset** , radiate forward from back
- Two-sided, tight, band like pain
- Less in morning, pain increase as day goes on
- **No** accompanying sensitivity to light, sound or movement





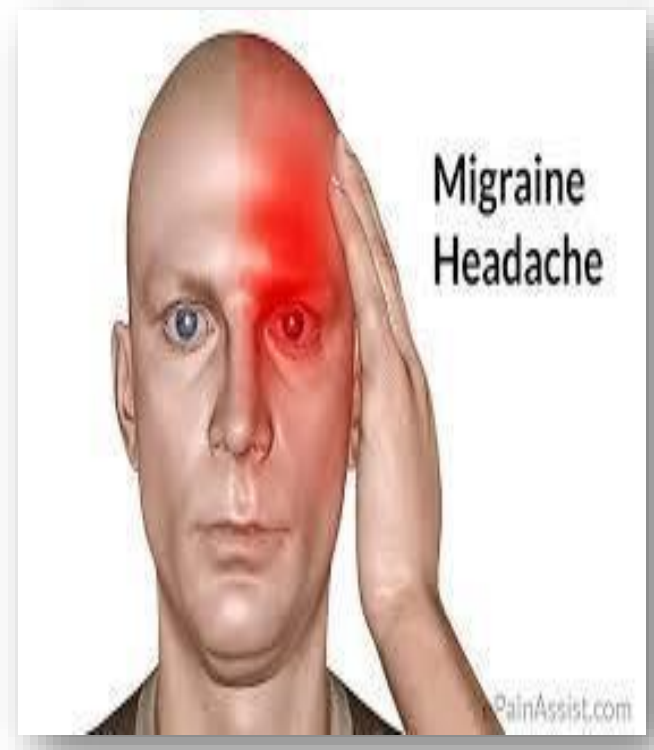
➤ Management

- Paracetamol, Aspirin, NSAIDs
- Behavioral approach-relaxation
- Chronic-amitriptyline



II- MIGRAINE

- 2nd most common-16%
- 15% women and 6% men
- Severe, episodic, one side, throbbing pain
- Nausea, Vomiting
- Sensitivity to light ,sound, movement
- Genetic predisposition



Pathophysiology

- Different theories suggest different causes

I. Vascular theory :

- **vasoconstriction** followed by **vasodilation** with resulting in changes in blood flow causes the throbbing pain .

II. Second theory :

- pain results from **muscular tension**

III. Biochemical changes:

- changes in **serotonin level**



Triggers

- Flashing lights , Loud sounds , Strong odors
- Stress
- Hunger
- Fatigue
- Smoking
- Pregnancy , Menopause , Oral Contraceptives
- Sleep changes
- Caffeine ,Chocolate ,Tyramine



Diagnosis

■ Simplified Diagnostic Criteria for MIGRAINE

<i>At least 2 of the following</i>	<i>+ At least 1 of the following:</i>
<ul style="list-style-type: none">○ Unilateral pain (one side)○ Throbbing pain○ Increased by movement○ Moderate or severe intensity	<ul style="list-style-type: none">○ Nausea/vomitting○ Photophobia and phonophobia



Management

- Non drug treatment
- Preventive therapy
- Abortive therapy



Management

➤ Non drug treatment

- Avoid headache triggers: foods, drugs, activities
- Avoid frequent abortive treatment
- Stop smoking
- Normalize sleeping and eating
- Exercise
- Relaxation and biofeedback
- Psychotherapy



Management

➤ Preventive Treatment

- Tricyclic antidepressants (first-line)
 - Amitriptyline
- Beta-blockers (first-line)
 - Atenolol, nadolol
- Ca⁺⁺ channel blockers – less effective
 - Verapamil most commonly used



Management

➤ Preventive Treatment

- Anticonvulsants (second-line; valuable)
- Valproate and topiramate are quite effective
- Gabapentin
- Pregabalin



Management

➤ Abortive Treatment

- Simple and combined analgesics e.g NSAIDs.
- Mixed analgesics (barbiturate plus simple analgesics)
- Triptans
- Opioids



Management

❖ Triptans:

- Serotonin 5-HT₁ agonists
- Reduce neurogenic inflammation
- Most effective if used at onset of headache, though may be helpful
- Used specifically for migraine



Management

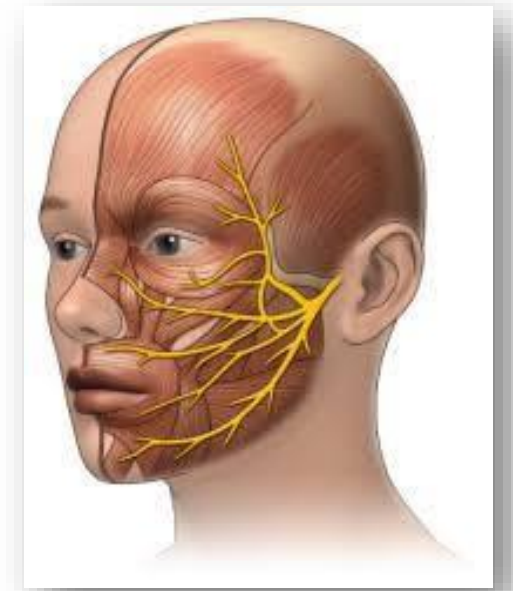
➤ Other Agents

- Antiemetics/Neuroleptics:
 - often combined with abortive agents
 - Prochlorperazine, hydroxyzine, promethazine, metoclopramide



III- Trigeminal Neuralgia

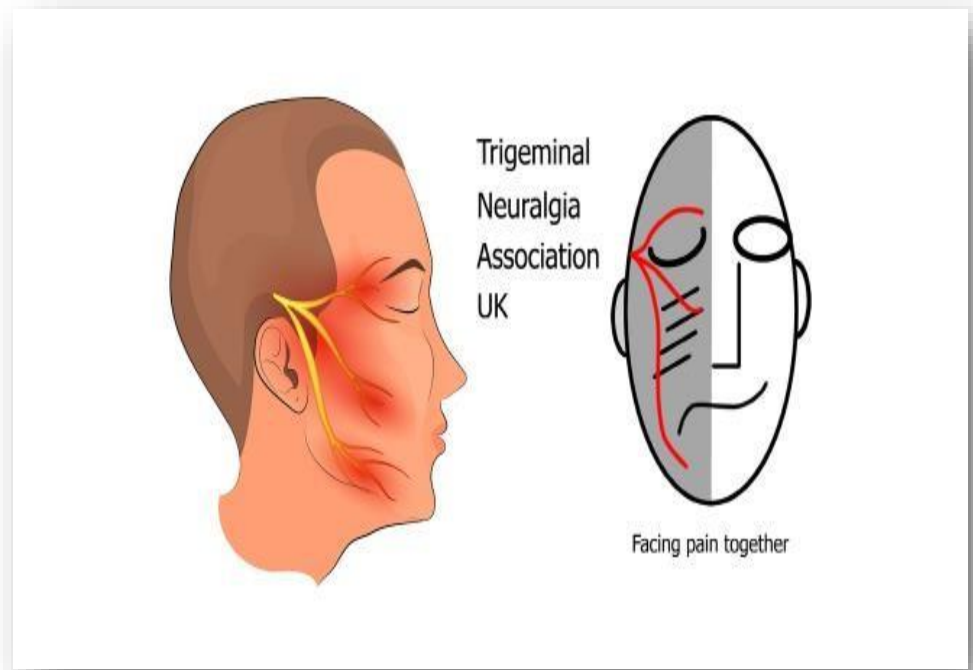
- Trigeminal neuralgia is a chronic pain condition that affects the trigeminal nerve, which carries sensation from your face to your brain.
- **occur in people who are older than 50.**



Trigeminal Neuralgia

Is sudden, severe facial pain. It's often described as a sharp shooting pain or like having an electric shock in the jaw, teeth or gums. It usually happens in short, unpredictable attacks that can last from a few seconds to about 2 minutes. The attacks stop as suddenly as they start.





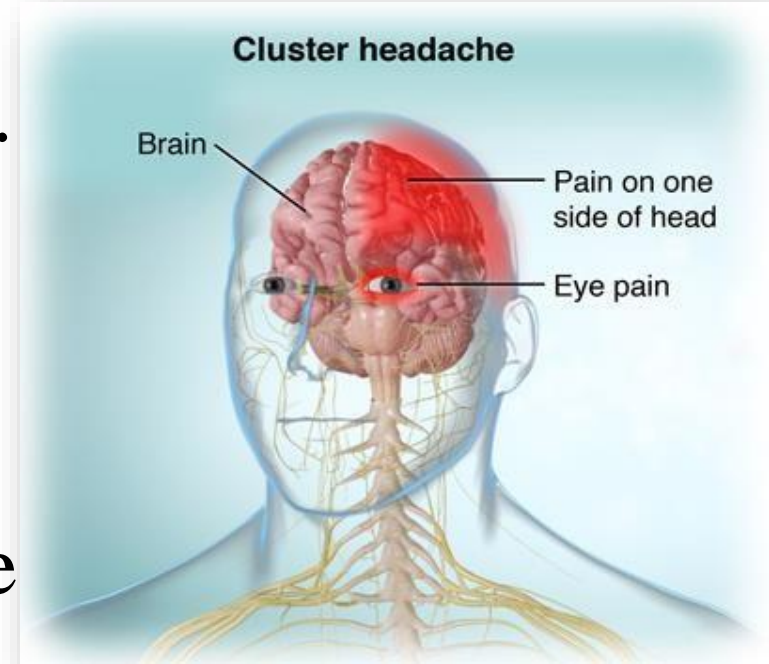
Management

- Carbamazepine
- Gabapentin/Pregabalin
- Injection of alcohol into peripheral branch of nerve



IV- CLUSTER HEADACHE

- Headaches occur during a short time period.
- A typical cluster of headaches may last 4-8 weeks with 1-2 headaches/day during the cluster.
- Patient may be free 6 months to 1 year before another cluster of headache occurs.
- Male to Female ratio 5:1

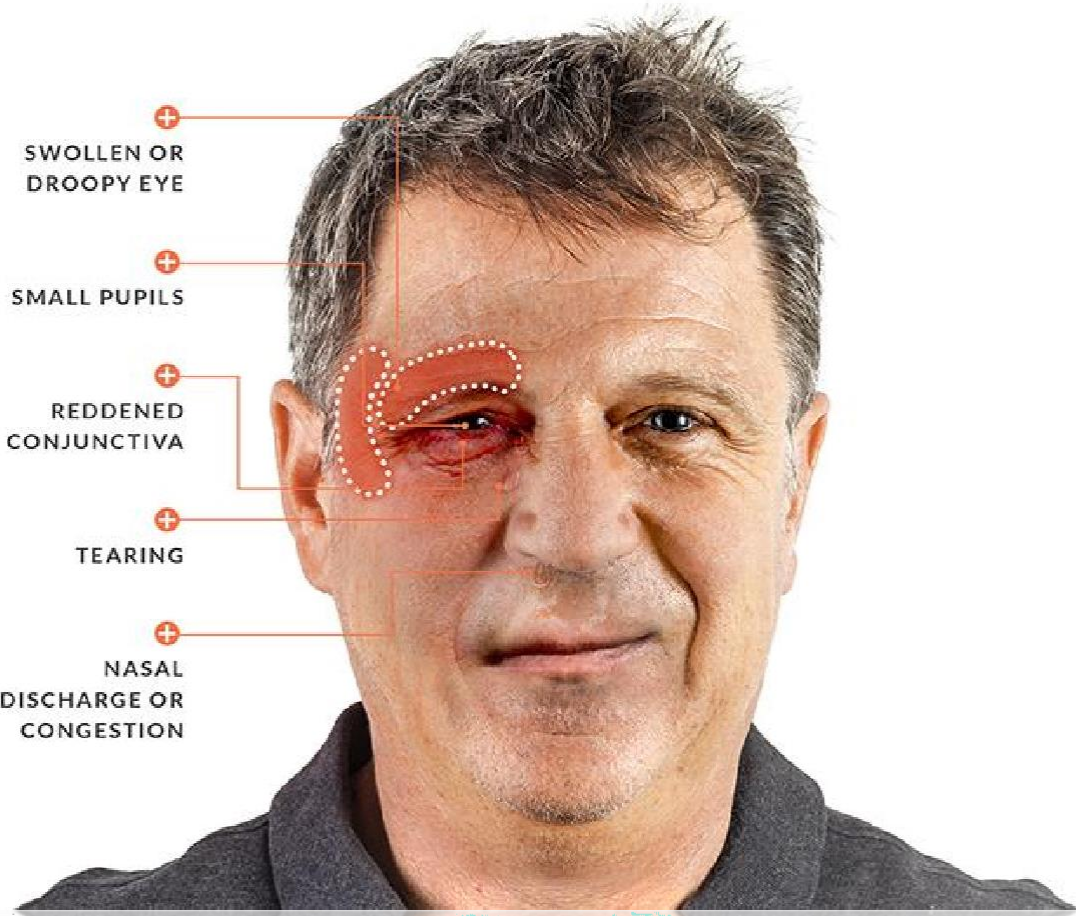


Symptoms & Signs

- Sudden onset of headache originating in the eye and spreading over the temporal area.
- Pain extremely severe and last 20-60minutes
- The headache associated with
 - ✓ Rhinorrhea
 - ✓ Nasal congestion
 - ✓ Redness of the Eye
 - ✓ Swelling around the eye on the affected side



- + SWOLLEN OR DROOPY EYE
- + SMALL PUPILS
- + REDDENED CONJUNCTIVA
- + TEARING
- + NASAL DISCHARGE OR CONGESTION



CLUSTER HEADACHES

EXCRUCIATINGLY SEVERE, UNILATERAL HEADACHES WITH PAIN THAT USUALLY PEAKS IN 10 MINUTES AND LASTS UP TO 3 HOURS

THE ORBITAL, SUPRAORBITAL, AND TEMPORAL REGIONS ARE THE USUAL SITES OF PAIN

OCCUR SEVERAL TIMES PER DAY IN "CLUSTERS" FOLLOWED BY A PERIOD OF REMISSION

FIRST-LINE PROPHYLAXIS IS WITH VERAPAMIL

ACUTE TREATMENT INCLUDES ADMINISTRATION OF 100% OXYGEN, SEROTONIN AGONISTS, AND ERGOTAMINES

IPISILATERAL AUTONOMIC SIGNS INCLUDING RHINORRHEA, LACRIMATION, MIOSIS, AND PTOSIS

CONGESTION
DISCHARGE OR
SWELL

Management

- **Acute:**
 - Oxygen inhalation 100%
 - Triptans/ergots
 - Indomethacin



Management

➤ Chronic/Preventive:

- Verapamil, lithium
- Valproate, topiramate
- Prednisone burst
- Melatonin
- Ergots



Medication Overuse Headache

- Recurring headache in the setting of regular analgesic use
- Continues until medication is stopped
- Often responsible for “transformation” of episodic into chronic headache



Primary Headaches

Band-like
Pressure



Tension-type
headache

Half head
Throbbing

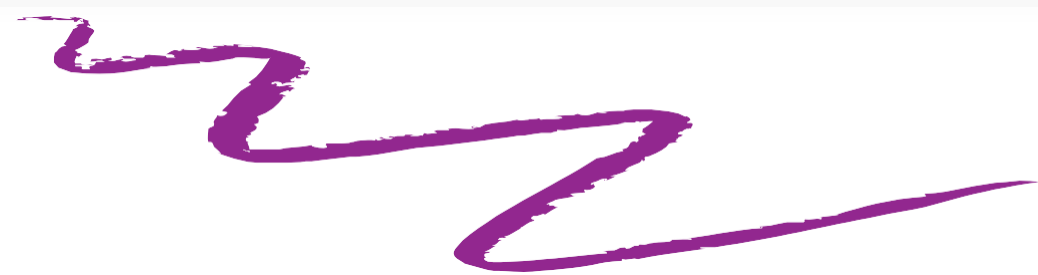


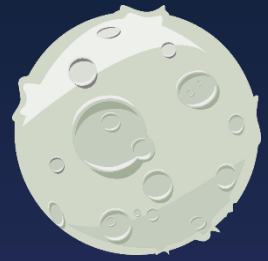
Migraine

Periorbital
Sharp



Cluster
headache





Thanks
for Coming

