HEADACHES

Foster

OUTLINE

- Introduction
- Classification
- Common headaches
- General Approach to headaches
- Red flags of headaches
- Conclusion

Incidence /prevalence

- 50% of general population have had a headache in the last 1 year
- Lifetime prevalence >90%   (*Global year against headache Oct 2011-2012)*
- Prevalence among Health workers in Nigeria- 66.7% (*Head Face Med. 2014)*

Pain sensitive structures

Intracranial

- Arteries of circle of Willis
- large veins, Dural venous sinuses
- Dura near blood vessels

Extracranial

- External carotid artery and branches, Scalp and neck muscles, skin, cutaneous nerves, cervical nerves, sinus mucosa, teeth, eye

Classification ICHD III

1. *Primary headaches*

- Migraine
- Tension-Type Headache
- Cluster headaches and other trigeminal-autonomic cephalalgias
- Other primary headaches

Cephalalgia 33(9)629-808

2. Secondary headaches

- Trauma -*subdural haemorrhage*
- Vascular- *stroke*
- Non vascular intracranial disorders- *brain tumours*
- Infections - *meningitis, encephalitis*
- Substance use or withdrawal -*amphetamines*
- Disorders of homeostasis
- Eye, nose, oral cavity, sinus, cranium and neck disorders
- Headache attributed to psychiatric disorder

3.Painful cranial neuropathies –Trigeminal Neuralgia

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Case 1

20 yr old Female

5 year Hx of disabling pounding temporal headaches, with nausea and sensitivity to light. 3 attacks per month. Triggered by lack of sleep and made worse by physical exertion. Untreated, they last for 2 days. Headaches are preceded by the gradual appearance of a shimmering, zigzag line that enlarges to the peripheral visual field and then fades away over 45 minutes.

Examination is normal. CT scan Normal.

Diagnosis?

Migraine

- Prevalence of migraine in Africa 5.6% (*J Neurol Sci . 2014*)

- Common in adolescence

  90% will have first attack by age 40

- F:M - 3:1

- Family history present in 90% of cases

Clinical features

- Headache attacks lasting 4-72 hours

- ➢ Unilateral location
- ➢ Pulsating quality
- ➢ Moderate or severe pain intensity
- ➢ Aggravation by routine physical activity

- Nausea and/or vomiting
- Photophobia and Phonophobia

- ± Aura

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With Aura (20-25%)

- Visual(*scintillating scotoma, teichopsia, fortification spectra)*
- Sensory
- Speech/language
- Hemiplegia
- Brainstem

Treatment

Abortive Therapy (mild – moderate)

Acetaminophen
NSAIDS

Severe
Triptans – zolmitriptan , sumatriptan
Ergots -Dihydroergotamine
Opiods
+
AVOID TRIGGERS
Stress smoking red wine fermeted foods, cheese, chocolate

- **Prophylaxis**

Given if attacks are frequent (1-2x a week) or disabling.

- B-Blockers - Propranolol 80-240mg
- Antidepressants – Amitryptilline 40-125mg
- Anticonvulsants –Topiramate 75-200mg Gabapentin ,Na Valproate
- Ca Channel Blockers-Verapamil

Case 2

45 yr old accountant

2 month history of headaches described as a tight band around the head. 4/10 in severity. Worse getting to the close of work. Relieved by rest.

Admits he has been under intense stress lately.

Examination – Normal

Neuroimaging –Normal

Diagnosis?

Tension Type Headaches

- Bilateral mild to moderate headache
- Tight band or pressure on the head
- Worse by close of work
- Wax and wanes or constant
- May have associated anxiety, depression

Rx/

Acute

Paracetamol, NSAIDS, opioids or combinations

Prophylaxis

Amitryptilline (most effective)

Others gabapentin, topiramate

Case 3

35yr M.

- Presents with 2 year history of recurrent severe right retroorbital pains.
- Associated with conjunctival injection, tearing and blocked nostrils and later Rhinorrhoea
- During attacks he sometimes develops unilateral partial ptosis with miosis of the right eye
- 3 attacks per day lasting 30min. Symptoms occur almost at the same time daily over a period of 6 wks , remits for 1 month and recurs.
- Headache is so severe that patient cannot sit or lie still but prefers to pace up and down.

Cluster headaches

Belongs to the **Trigeminal autono**
cephalalgias which include SUNA

Nicknamed " *suicide headache* "

Most painful recurrent headache
More common in males
M:F 3:1
Common in 30's

Clinical features

- Severe unilateral headaches retro orbital or temporal, abrupt onset peaks 5-10min and lasts 45min-2hours
- Occur in clusters ;usually 6-12wks separated by a month or longer.
- 1-3 attacks per day
- Periodic, worse at night
- Blocked nostril, conjunctival injection, tearing, then rhinorrhoea at the end of attack
- Horners syndrome

- Restless and prefers to pace up and down during attacks.

Treatment

Acute

O2 therapy, SC sumatriptan, Dihydrergotamine

Others: zolmitriptan, octreotide, intranasal

Lidocaine

Transitional : Steroids(short course)

Maintenance: Verapamil, lithium, topiramate

Surgical :Ablation of Trigeminal ganglion, DBS

Other primary headaches

1. Primary cough headache
2. Primary exertional headaches

3. Primary headaches associated with sexual activity
 (Preorgasmic, Orgasmic)
 Common in males mean age. 37yr

 Rx/
 Indomethacin 30-60min before sexual activit
 Triptan 30-45 min prior

 Exclude SAH for new onset.

Secondary Headaches - Case 4

- 54 year old hypertensive ,poorly controlled

Sudden onset of severe occipital headaches and neck pain ,worse headache of her life associated with drooping of left eyelid

On examination, Afebrile, BP- 220/120mmH

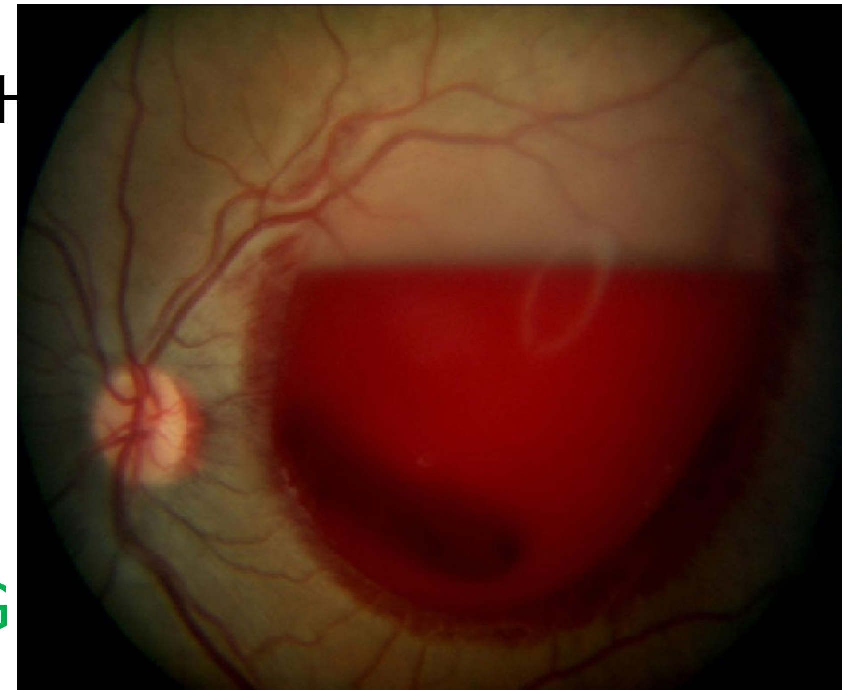
GCS 14/15,

CN III palsy of left

Neck stiff, Kernigs Sign +

No other focal signs

Diagnosis? SUBARACHNOID HAEMORRHAG



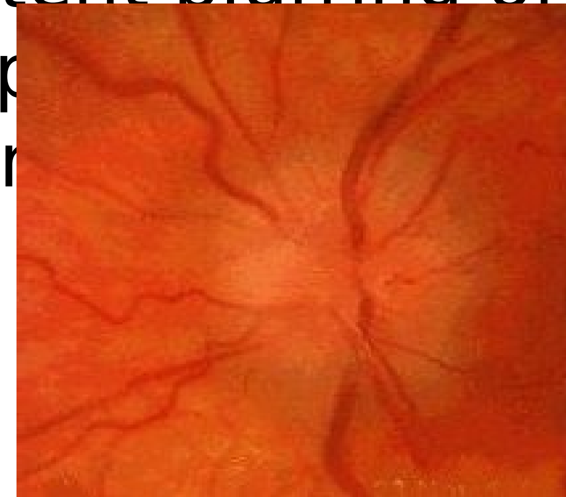
Case 5

23 yr old Female

Presented with 2 week Hx of severe global headaches worse when she wakes up in the morning sometimes. It is aggravated by coughing.

Associated with diplopia and intermittent blurring of vision when she assumes an upright p

sc eartbeat in her



Idiopathic intracranial Hypertension-IIH

- Common in obesed women in their reproductive age
- Cause Unknown Impaired CSF
- Headaches worse in the morning ,aggravated by coughing
- Transient blurring of vision when position is changed from sitting to standing.
- Diplopia
- Pulsatile Tinnitus
- CN VI palsy
- Papilledema
- Visual field defects ,Impaired colour vision

Investigations

- CT scan
- MRI/MRV
- Visual field assessment - Perimetry
- Lumbar puncture – Increased CSF opening pressure >200mmH2O
- Others- Connective tissue screen

Treatment

Medical

- Weight loss
- Acetazolamide 1-4g/day, Furosemide
- Steroids- short course

Surgical

- Optic nerve fenestration
- Lumboperitoneal/VP shunt
- Venous sinus stenting?

Ocular causes of headaches

- **Acute angle closure glaucoma**

  Extreme eye and frontal headaches with associated vomiting

  sclera injection, cloudy cornea, fixed midposition pupil

  with stony hard globe.

- **Refractive error** not a common cause of headaches

  Hyperopia in children and adolescents cause a dull orbital and frontal

  ache from straining to accommodate at school

Giant cell arteritis

- Medium to large artery vasculitis
- Common in the elderly ,Peak age - 80 yrs M:F 4:1
- Presents with headaches ,joints pains , fever, jaw claudication
  amaurosis fugax, visual loss, TIA, Stroke
  Superficial temporal artery tenderness on palpation

Investigations :Raised ESR+CRP, Temporal artery Biopsy or MRI

RX/Prednisolone 40-60mg
Methrotrexate

Trigeminal Neuralgia

- Age usually >40 yrs
- Paroxysmal electric shock-like, shooting, lancinating pain felt in the trigeminal distributions. Usually in 2nd and 3rd divisions
- Triggered by ipsilateral sensory stimulus to the skin, mucosa or teeth such as chewing, brushing
- Rx/Carbamazepine

Nerve blocks, microvascular decompression

Approach-History

- Site, radiation, severity, character, timing, onset, duration, frequency
- Aggravating and relieving factors
- Associations-

  Aura, Nausea, vomiting

  Photophobia, phonophobia,

  Seizures, Visual disturbance, tearing, Rhinorrhoea

  Trauma, fever, Hypertension, drugs , psychsocial stress

Approach-Examination

- General –Obesity , Fever, signs of trauma
- Cardiovascular - BP ,Pulse
- Neurologic exam - LOC, CNVs (Ptosis, pupils, EOM, Other CNVs, Neck stiffness, Kernigs ,motor and sensory exam)
- Fundoscopy

Approach- Investigations

- Neuroimaging-CT/MRI/MRV
- Visual field testing,OCT
- Lumbar Puncture
- FBC+ ESR, CRP
- C-Spine Xray
- HIV screen (If suspected)

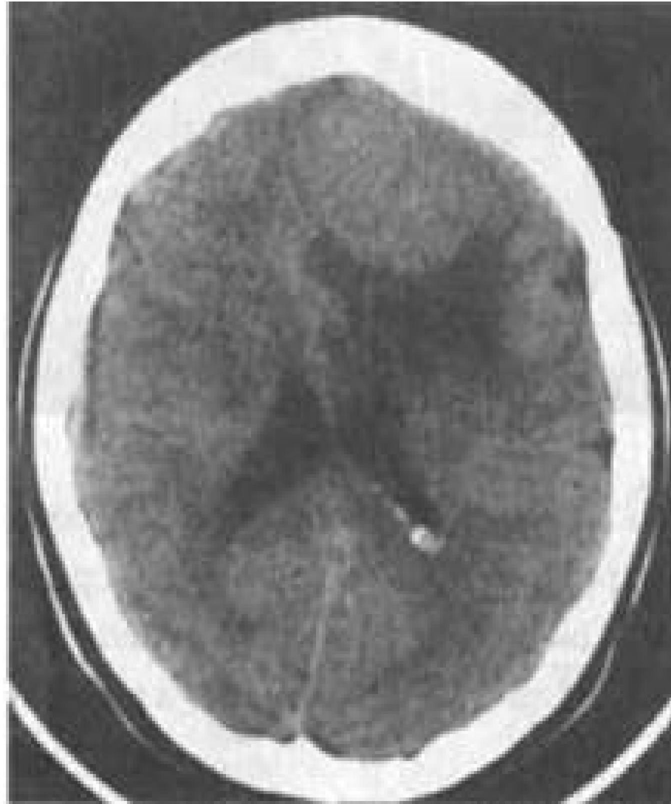
RED FLAGS

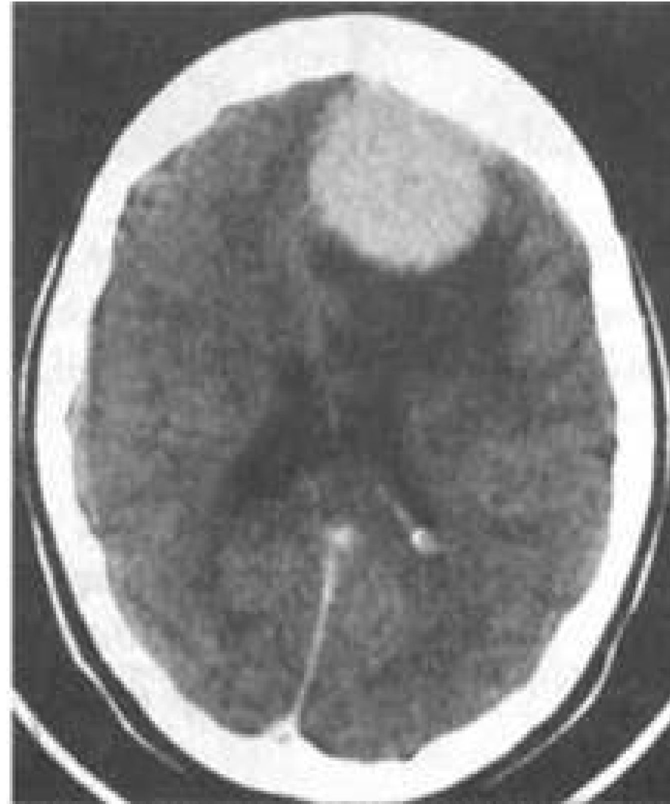
- Sudden onset of headache
- Worst headache
- Severity changes with posture(upright or supine)
- Provoked by valsalva manouver(cough ,straining)
- Progressive increase in frequency or severity
- Seizures
- Loss of consciousness
- Associated with malignancy, Immunosuppression
- Associated with fever, neck stiffness
- Focal neurologic signs or symptoms
- Papilloedema
- Onset after 50 years of age

Case 6

- 1 year history of gradual onset of moderate frontal headaches; throbbing, worse when he wakes up in the morning. Sometimes vomits. Aggravated by coughing or straining
- Has had 5 focal motor seizures involving the right side of the face and right arm
- Relatives have recently noticed personality changes
- Examination showed right facial palsy(UMN) and right hemiparesis.
- Most likely diagnosis?
- What test will you request for?

CT scan- Frontal lobe meningioma





Summary

- Classification of headaches
- Examples of primary and secondary headaches
- General Approach to headaches
- Red flags of headaches

thank you!

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