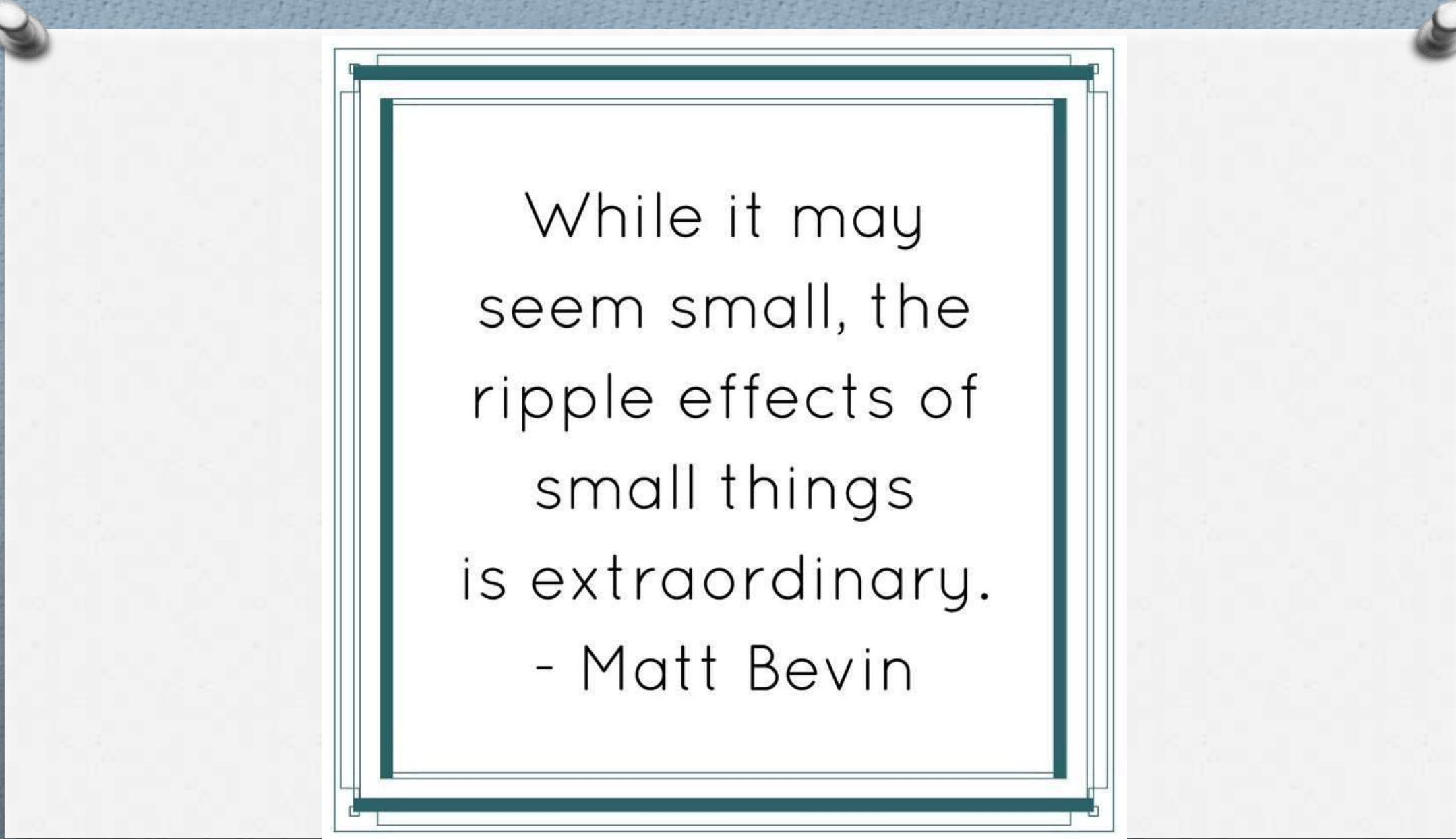


HEADACHE IN PRIMARY CARE

Ope Ajayi



While it may
seem small, the
ripple effects of
small things
is extraordinary.
- Matt Bevin

BURDEN

- o Headache disorders collectively were the second highest cause of years lost to disability
- o Migraine is the 7th most disabling disease worldwide
- o In the UK, 3% of GP consultations & 30% of neurology consultations are for headache
- o Migraine is estimated to cost the NHS 150 million GBP per year, mostly from the cost of prescription drugs & GP visits

How common is migraine?



1 Billion Worldwide



1 in 4 Households



1 in 5 Women



1 in 16 Men



1 in 11
Children

Definition

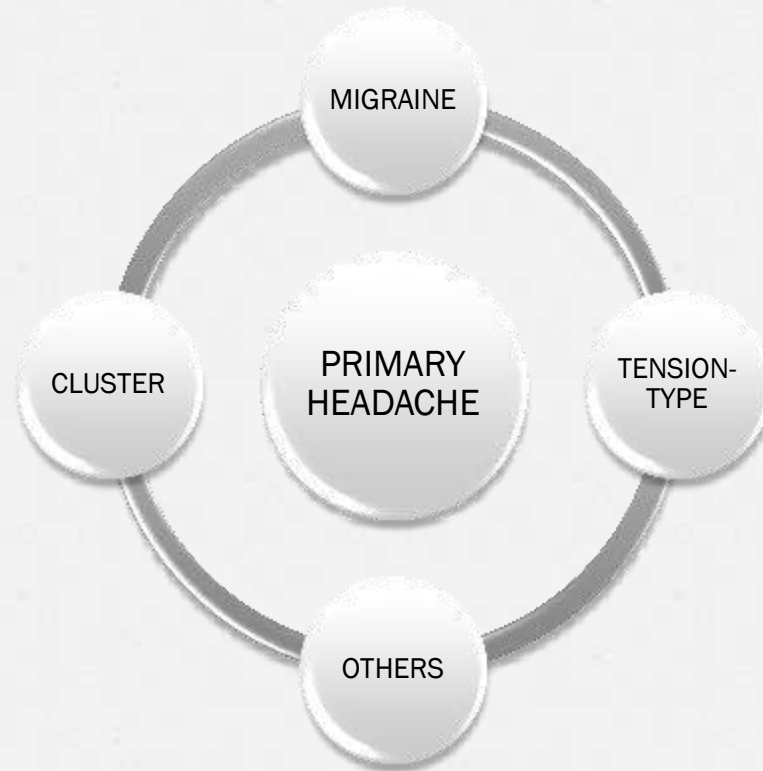
- Primary headaches are those in which the headache and its associated features are the disorder in itself
- Secondary headaches are those caused by exogeneous disorders



Pathophysiology

- Few cranial structures are pain producing
 - Scalp
 - Middle meningeal artery
 - Dural sinuses
 - Falx cerebri
 - Proximal segments of large pial arteries
- Non-pain producing structures
 - Ventricular ependymal, choroid plexus
 - Pial veins, much of brain parenchyma

HEADACHE CLASSIFICATION



Other forms of primary headache

- Primary Stabbing headache
- Primary cough headache
- Primary exertional headache
- Primary sexual headache
- Primary thunderclap headache
- Hypnic headache
- Hemicrania continua
- New daily persistent headache

Secondary Headaches

- o Headache attributed to trauma or injury to the head and/or neck
- o Headache attributed to cranial or cervical vascular disorders
- o Headache attributed to non-vascular intracranial disorders
- o Headaches attributed to a substance or its withdrawal: MOH
- o Headache attributed to infection
- o Headache attributed to disorder of homeostasis

For more information, check International classification of headaches



- o Joseph is a 14-year-old boy. He attends your clinic accompanied by mum, Claire. He presents with a 2-month history of headaches that he describes as 'banging' and that has made his head 'very very sore'. He says that in the past 2 months he has had 6 of these headaches. He also says that light hurts his eyes when he has headaches. He does not feel nauseous or vomit during headaches.
- o Claire tells you that when Joseph has the headaches he is unable to go to school and that the headaches lasts from 2 to 4 hours. She gives Joseph Paracetamol and if that doesn't work she also gives him Ibuprofen. Joseph reports that this combination of medication helps but it still hurts a lot until the headache eventually goes completely
- o Joseph and Claire asks if Joseph's headaches are migraines and if there is anything more he can take to ease the pain and reduce the amount of time he is taking off school

- o What is the diagnosis?
- o Claire asks what this means for Joseph. How would you answer this?

- o Migraine without aura
- o What does this mean for Joseph?
 - o A serious underlying cause is unlikely
 - o Well-recognized problem
 - o Reassure them you understand the large impact headaches are having on Joseph's life
 - o Give them written information about migraine in a format suitable for both, include information about support organizations
 - o Explain the risk of medication overuse headache

Support organisation

- o NICE information for the public –
<http://publications.nice.org.uk/IFP150>
- o Migraine action, 01162758317 www.migraine.org.uk
- o The migraine Trust, 02073616970; www.migrainetrust.org

How will you manage?

- o Nasal sumatriptan with paracetamol/NSAID
- o How about triptan in tablet or capsule?
 - o Tablets and injection not licensed for use in children

- o What tool could you use to help assess the effectiveness of the nasal triptan?

Headache Diary

- o Aids in the diagnosis of primary headaches
- o A person records for a minimum of 8 weeks
 - o Any associated symptoms
 - o All prescribed and over the counter medications taken to relieve headaches
 - o Possible precipitants
 - o Relationship of headache to menstruation

- o Claire and Joseph thank you for your help and leave. As you are reflecting on Joseph's case, you think about other treatment options that might be suitable for Joseph if the triptan nasal spray doesn't work well enough for him.
- o What other treatment options would be available?

- o Nasal sumatriptan with paracetamol/NSAIDs
- o Different formulation of nasal triptan, triptan tablets or melts
- o Consider adding an anti-emetic

- o Anna is a 28-year-old lady who was diagnosed with migraine with aura 6 months ago. She has, on average, 1 migraine attack per week, for which she takes triptan, an NSAID and an anti-emetic.
- o Because Anna has migraine about 4 times per month, she is unlikely to develop medication overuse headache. You are therefore happy with her current treatment plan.
- o However, during an attack, she is unable to work or continue her normal daily activities. She also worries a lot about when the next attack is going to happen and their frequency causes her to take a lot of time off work.
- o You note from Anna's records that other than the medication mentioned above she is not taking any other forms of medication. You want to confirm that she is not taking combined hormonal contraceptive for contraception purposes. **Why is this?**

- o There is an increased risk of ischemic stroke in people with migraine with aura
- o This risk is increased in women using combined hormonal contraception

o Anna asks if there is anything that can be done to reduce the frequency of her migraine attacks.

Prophylactic treatment

- They aim to reduce the frequency, severity and duration of attacks
- Explain risk and benefits of prophylactic treatment
- NICE guideline recommends
 - Topiramate
 - Propranolol
 - Amitriptyline
- What important information do you need to tell her about topiramate?

- o Given that Anna is of child bearing potential, it is important for her to be aware that topiramate is associated with a risk of fetal malformations
- o Also, as Anna is currently using contraception, she needs to be aware that there is potential for topiramate to impair the effectiveness of hormonal contraceptives

- o Anna decides not to use any contraception and you prescribe her propranolol
- o When would you need to review the need to continue this prophylaxis?

- o Continuing treatment when it is no longer needed puts the person at risk of having side effects and drug interactions
- o Experts agree that many people can stop prophylaxis after 6 months of treatment
- o Therefore, you would review Anna's need to continue prophylactic treatment at 6 months

o Any natural remedy which could help reduce her migraine intensity?

o Riboflavin 400mg once a day may help

o Products containing riboflavin can be purchased from pharmacies and health food stores

o Acupuncture could help if not deriving much benefit from propranolol

- o If Anna wants to become pregnant in the future, but still needs migraine prophylaxis, what should you do?

- o Migraine without aura often improves during pregnancy. However, migraine with aura is more likely to continue through pregnancy
- o If Anna becomes pregnant, you should assess whether she needs prophylaxis during her pregnancy. If she does, seek specialist advice
- o Specialist advice can be over the telephone to avoid delaying a prescription
- o Review and discuss her use of triptan, NSAID and anti-emetics, because of the risks associated with these medications during pregnancy

- o Malcolm is a 31-year-old man. He has a history of severe headaches, which he says causes him the worst pain he's ever felt. When he gets these headaches, he has pain on 1 side of his head, around his eye and along the side of his face. He also experiences drooping or swelling of the eyelid, watery eye and nasal congestion, on the same side as the headache.
- o Malcolm experienced the severe headache for the first time 2 weeks ago for which he went to the accident and emergency, where he was given a CT scan. The CT scan was normal and you have been asked to evaluate Malcolm.
- o Malcolm tells you that, since his first severe headache 2 weeks ago, he has experienced 6 more headaches. He says that on average his severe headaches last from 30 to 90 minutes

o What is the diagnosis?

o What interventions could help Malcolm during an attack?

CLUSTER HEADACHE

o <https://youtu.be/005oDaG45kE>

- o Subcutaneous or nasal triptan
- o Offer home and ambulatory oxygen
 - o Exclude history of respiratory disease or COPD
 - o 100% oxygen at 12L/Min with non-rebreathing mask and reservoir bag
 - o Order the oxygen by completing a home oxygen order form (HOOFF) (also order non-rebreathing mask)
- o Provide adequate supply of medication to reduce the pain

- Prophylaxis

- Verapamil

- Advisable discussing with GPSI in headache or neurology

- Medications you will not offer Malcolm

- Paracetamol, NSAIDs, Oral Triptans, ergots or opioids

- o Joseph is a 48-year-old man with a 13 year history of severe daily headache and a moderate migraine every 2 to 3 months. The migraine headaches do not bother him very much, but the daily headaches are debilitating. They hurt in a band-like distribution about his head, and are often accompanied by moderate to severe neck pain, more on the right. Joseph sleeps well and does not have any medical problems other than the headaches. He is under moderate stress, but states emphatically that stress plays only a minor role in exacerbating his headaches.

PRESENTATION

- Featureless, generalised headache
- Mild to moderate in severity
- Described as pressure or tightness or tight band around the head
- Often has relationship with the neck, with pain into or from the neck
- Photophobia, phonophobia and visual/sensorimotor disturbance absent

Tension-Type Headache

- o Acute treatment:
 - o Aspirin, paracetamol or NSAID
 - o No opioids
- o Prophylactic treatment
 - o Up to 10 sessions of acupuncture over 5-8 weeks for chronic tension-type headache

Medication Overuse Headache

- Headache developed or worsened while taking the following drugs for 3 months or more
 - Triptans, opioids, ergots or combination analgesic medications on 10 days per month or more
 - Paracetamol, aspirin or an NSAID either alone or in combination on 15 days per month or more

Medication Overuse Headache

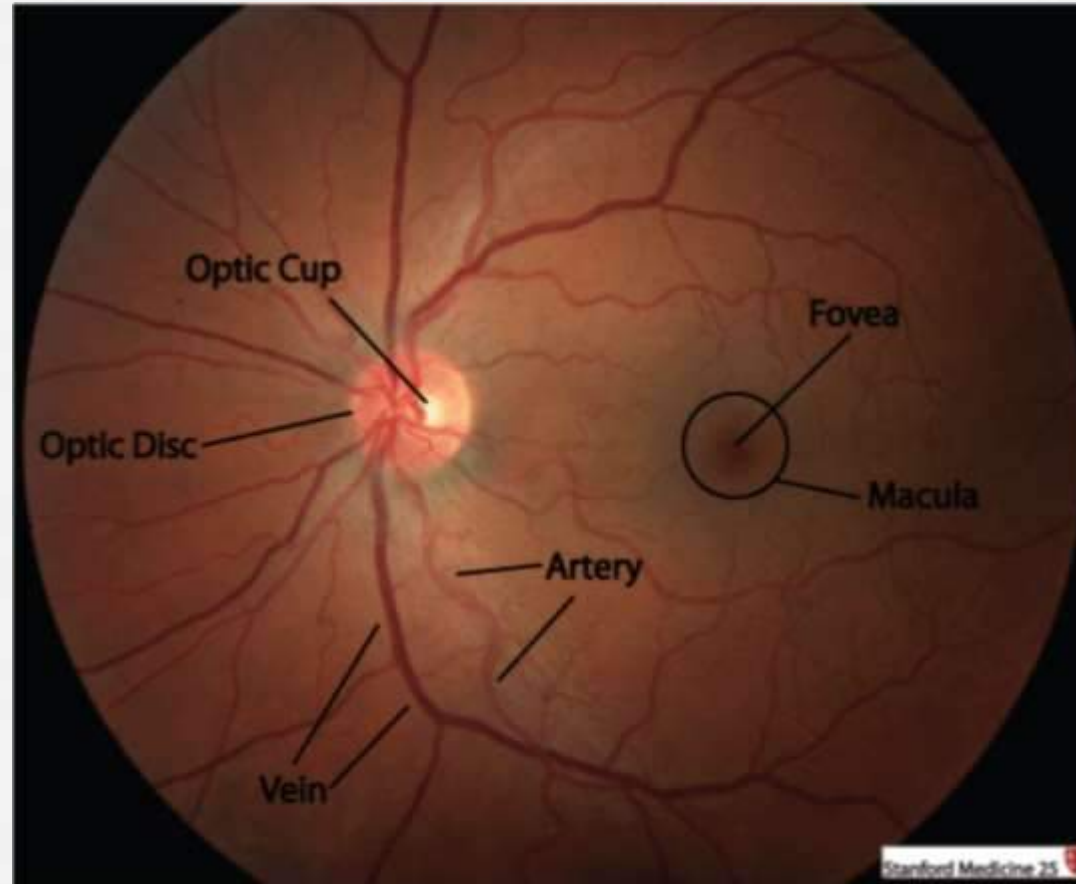
- o Advise to stop taking all overused acute headache medications for at least 1 month
- o Advise to stop abruptly rather than gradually
- o Advise symptoms are likely to get worse in the short term before they improve
- o Consider prophylactic treatment for the underlying primary headache disorder
- o Consider specialist referral and/or inpatient withdrawal of overused medication for people using stronger opioids or have relevant comorbidities or where previous attempts were not successful

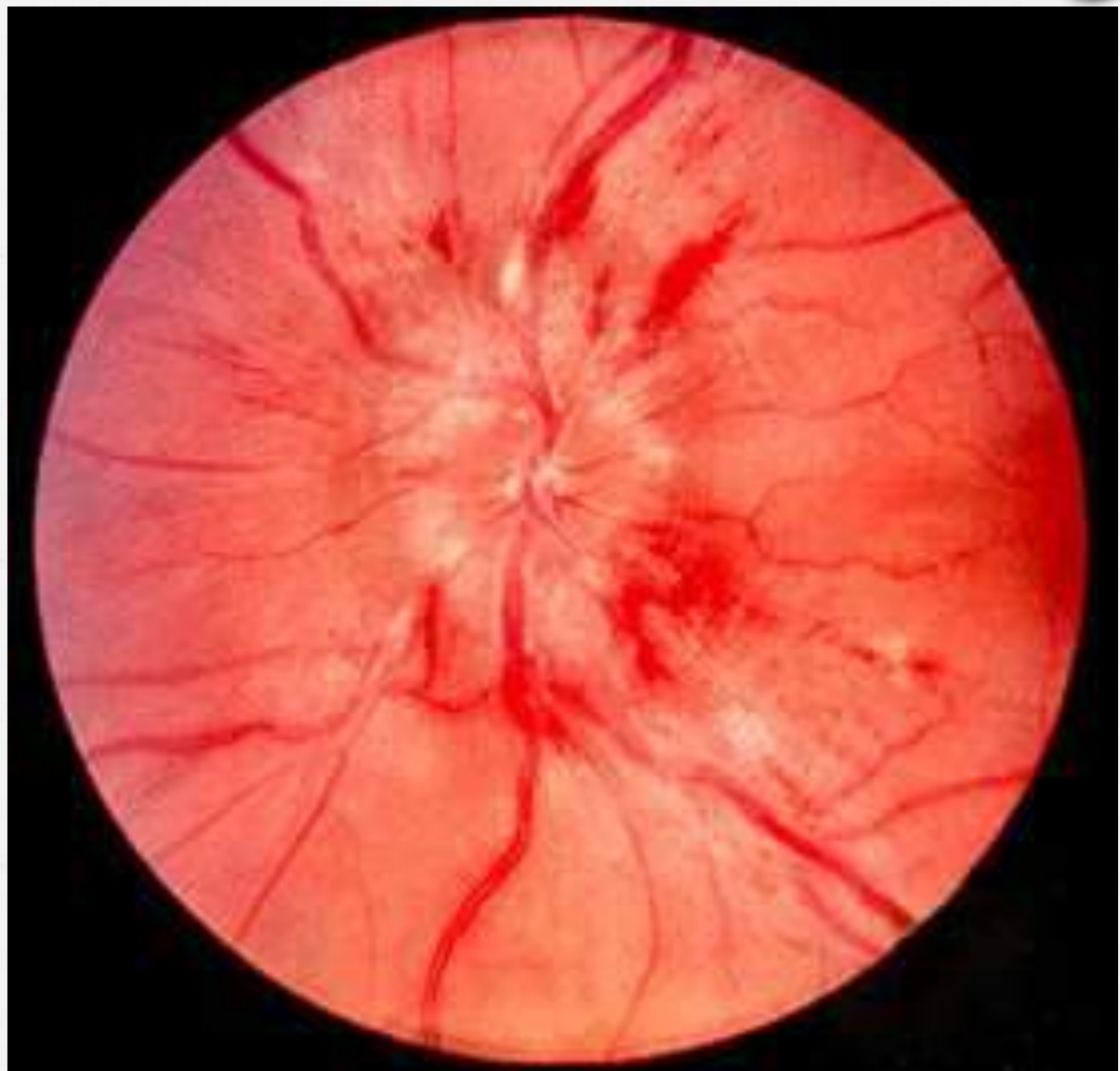
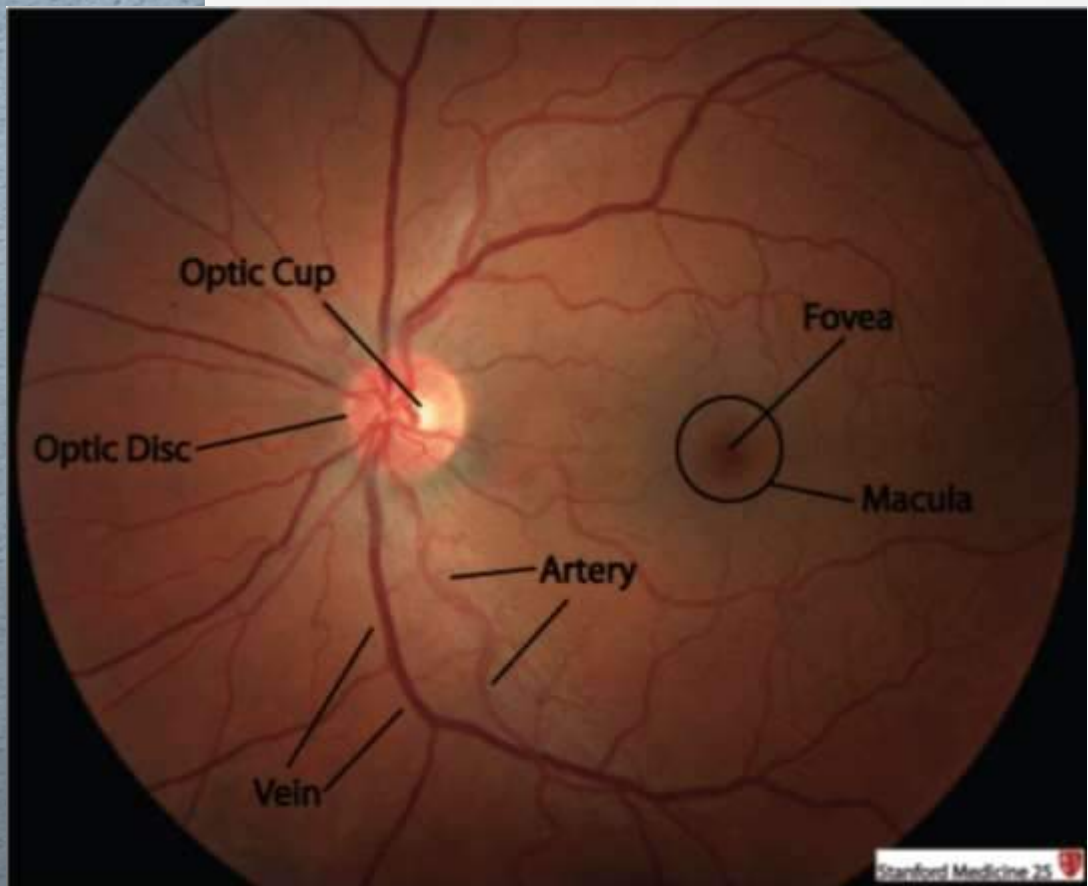
Examination

- o Fever
- o Rash
- o BP
- o Brief Neurological examination
 - o Fundi
 - o Visual acuity
 - o Gait
- o Palpation of temporal region and sinuses
- o ESR (if temporal arteritis suspected)

o <https://youtu.be/wPzCA9k8GRQ>

Fundus







Red Flag Features

- Worsening headache with fever
- Sudden-onset headache reaching maximum intensity within 5 minutes
- New-onset neurological deficit
- New-onset cognitive dysfunction
- Change in personality
- Impaired level of consciousness
- Recent (typically within the past 3 months) head trauma
- Headache triggered by cough, valsava



Red Flag Features

- Headache triggered by exercise
- Orthostatic headache
- Symptoms suggestive of giant cell arteritis
- Symptoms and signs of acute narrow angle glaucoma
- A substantial change in the characteristic of the headache
- Compromised immunity
- Age under 20 years and a history of malignancy
- History of malignancy known to metastasize to the brain
- Vomiting without any obvious cause

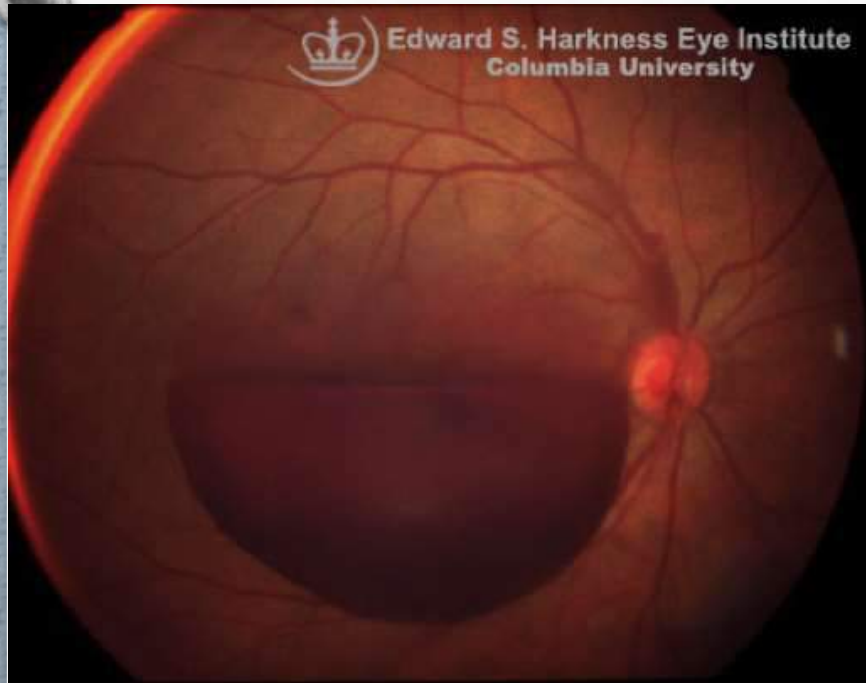
Red Flag Features

Fever
Photophobia
stiff neck
rash

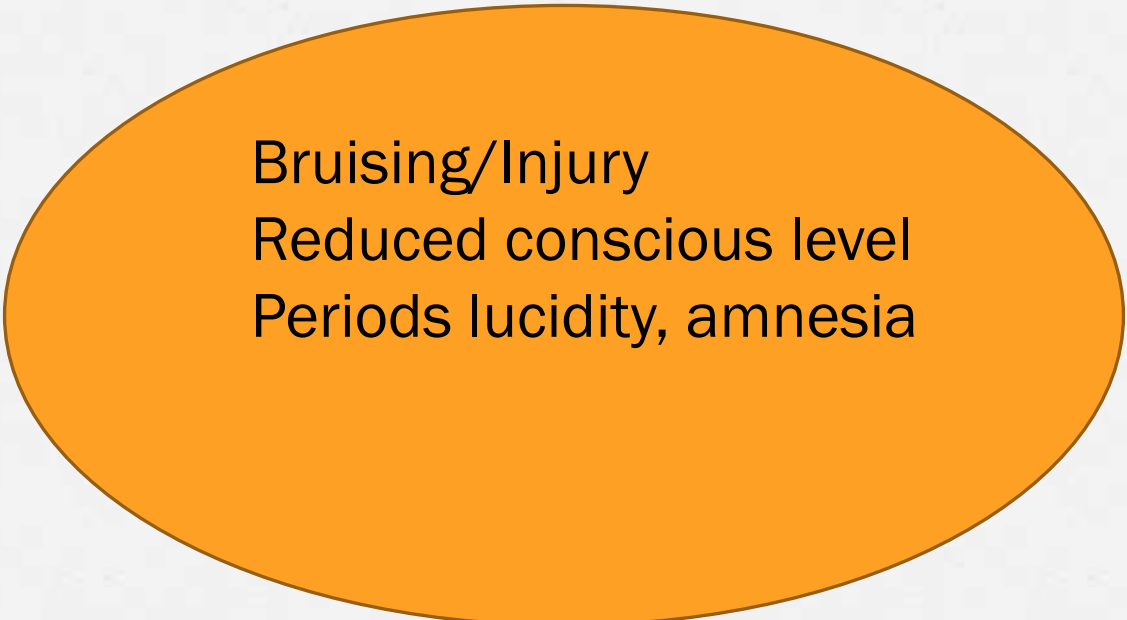
Red Flags 2



**Fever
Confusion
reduced conscious level**



**‘Thunder-clap’ or very sudden onset headache
With or without stiff neck**

An orange oval with a thin black border is centered on a white rectangular background. The oval contains three lines of black text. The white background is pinned to a blue textured surface at the top corners.

Bruising/Injury
Reduced conscious level
Periods lucidity, amnesia

o A 23-year-old female presents with recurrent headaches. Examination of her cranial nerves reveals the right pupil is 3mm while the left pupil is 5mm. The right pupil constricts to light but the left pupil is sluggish. Peripheral neurological examination is unremarkable apart from difficult to elicit knee and ankle reflexes. What is the most likely diagnosis?

- o Acute angle closure glaucoma
- o Migraine
- o Multiple sclerosis
- o Holmes-Adie syndrome
- o Argyll-Roberson syndrome

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- o **Holmes-Adie syndrome**
- o Argyll-Roberson syndrome

o A 38-year-old man describes severe, daily headaches above the right eye, each lasting 15-20 minutes, for the past week. The headaches are associated with nasal congestion. Which of the following is the single most appropriate Initial treatment for the acute attack? Select one option only

- o Codeine Phosphate
- o Ergotamine
- o Naproxen
- o Paracetamol
- o Sumatriptan nasal spray

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- o Ergotamine
- o Naproxen
- o Paracetamol
- o **Sumatriptan nasal spray**

o A 60 year-old Caucasian woman, not normally prone to headaches, describes the onset of pain over the left side of her head during the past two days. It is jabbing in nature and is aggravated by combing her hair. She has also noticed pain in the jaw when eating or talking. She has no rash. What is the most likely diagnosis? Select one option only

- o Acute closed-angle glaucoma
- o Migraine
- o Retinal artery occlusion
- o Temporal arteritis
- o Trigeminal neuralgia

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- o Acute closed-angle glaucoma
- o Migraine
- o Retinal artery occlusion
- o **Temporal arteritis**
- o Trigeminal neuralgia

o A 65-year-old lady presents with a feeling of a shade covering part of her left eye. She has also had intermittent headaches on that side. She describes jaw pain when chewing. Her temporal artery is tender. Blood test reveals an ESR of 58mm/hr. What is the most appropriate treatment?

- a) Aspirin 300mg straight away
- b) Prednisolone 40mg
- c) Prednisolone 60mg immediately
- d) Refer to Ophthalmology urgently (within 2 weeks)
- e) Refer to rheumatology urgently (within 2 weeks)

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Headache as SE of drugs

- o Headache is most characteristically caused by
 - o Corticosteroid
 - o Combined Oral contraceptive pill
 - o Carbamazepine
 - o Ciclosporin
 - o Levodopa
 - o Sodium Valproate

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 - o Cyclosporin
 - o Levodopa
 - o Sodium Valproate

- o 1. Which THREE statements regarding Raeder's syndrome are correct? Select THREE statements only.
- a. Pain reaches peak in 40 minutes and lasts for more than eight hours
 - b. Can be associated with Horner's syndrome
 - c. Bilateral
 - d. Lithium may be used for prophylaxis
 - e. Exacerbated by alcohol
 - f. Amitriptyline is used for abortive therapy in acute attacks

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o TO SUMMARIZE...

TREATMENT - MIGRAINE

o ACUTE TREATMENT

- o Oral Triptan + NSAID/Paracetamol
- o Monotherapy: Triptan/NSAID/Aspirin/Paracetamol
- o Consider antiemetic
- o Don't offer ergot derivative or codeine

o Prophylactic treatment

- o Topiramate (associated risk of fetal anomaly and can impair effectiveness of hormonal contraceptives)
- o Propranolol
- o Amitriptyline
- o Acupuncture
- o Riboflavin may reduce frequency and intensity (400mg once a day)

Cluster Headache

- Prophylactic
 - Verapamil (Prednisolone, Lithium, Melatonin, Topiramate, Na Valproate, Ergotamine, Methysergide, Nifedipine)
 - Specialist advice is needed in pregnancy
- Interventional procedures
 - Transcutaneous stimulation of the cervical branch of the vagus nerve for cluster headache
 - Implantation of a sphenopalatine ganglion stimulation device for chronic cluster headache

“HEALTHY CITIZENS
are the greatest asset any country can have.”

- Winston Churchill



o Thank you for listening

Reference

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