Headache Management in Primary Care

Dr Niranjanan Nirmalananthan
Consultant Neurologist

Wednesday 10th of April 2019

Summary

- Why does it matter?
- Classification and diagnosis
- Who to refer / scan?
- Serious & Common headaches

Why does it matter?

- **Common**
  - **3% of GP consultations**
  - 2% of A&E attendances
  - 20% of all acute neurology admissions
  - Up to 25% of General Neurology OPD

- **Important –** Migraine alone
  - WHO Top 10 causes of disability
  - £250 million direct cost to NHS
    - mostly primary care
  - £2.25 billion absenteeism losses
  - Presenteeism

What do GPs See?

- TTH 21%
- Migraine 72%
- Cluster 2%
- *Secondary headaches* 5%

Kernick, 2008

Headache – making a diagnosis

- **History is everything**
- Brief focused examination excludes serious pathology
- For *most* patients tests add (very) little.
- Main question is ? Primary or Secondary

Taking a headache history

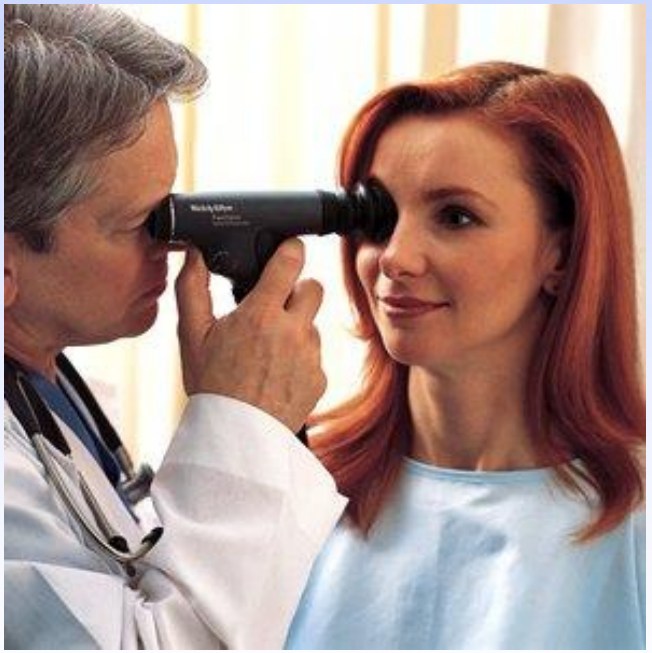
- ONSET
  - How “sudden” is sudden?
  - **“How long did it take to get to its worst“**
- Duration
  - How long?
  - ***Truly constant?*** or variable / episodic? Frequency?
  - “Crystal Clear” days?
- Severity
  - Link it to duration
    - Minimum / Maximum, proportion at maximum
- Quality
  - **Throbbing**
  - Aching, stabbing, etc. etc.
- Antecedent headache history
  - ***Ever*** get headaches?
  - Periods, Hangovers, “Hungry headaches”
  - Triggers, caffeine
  - Cyclical vomiting / Benign childhood vertigo / Abdominal migraine / Travel sickness

Headache history – associated features

- **Migrainous features**
  - Photophobia / Phonophobia / Osmophobia / Kinetophobia
  - Nausea / vomiting
  - **Aura** – visual / sensory / motor / aphasia / etc.
- **Pressure features**
  - Effect of posture
  - *Bending forward*
  - Cough / Sneeze / **Strain**
  - Visual obscurations / Pulsatile tinnitus
- **Cervical features**
  - pain / tenderness / reduced range of movement
- **Autonomic features** (? Cluster headache / TAC)
  - ***Unilateral*** tearing, conjunctival injection, rhinorrhea, flushing etc.
- **Drug History**
  - **Analgesic overuse! OTC meds**
  - Drug-induced headache (sildenafil, nitrates, clopidogrel etc. etc.)

Focused Examination

- **Systemically unwell**: tachycardic, hypertensive, fever**,** rashes
- ***Obvious*** focal neurological signs
  - Standard neurology
    - Pupils
    - Eye movements
    - Facial sensation / movement
  - Cognition
  - Personality
- Nuchal rigidity ≠ Neck tenderness
- Temporal artery pulsation / tenderness
  - Best palpated anterior to tragus
- **Fundoscopy** (Panoptic)
  - Papilloedema



- ? Bloods
  - ESR in over 50s

Thinking Fast and Slow - Heuristics

- Contextual information
  - Longitudinal knowledge of patient
  - ± patient's family
- "The test of time"
  - Most primary care headache is benign and self-limiting
  - 70% of primary care headache, no diagnosis made
- Beware of first impressions lasting
  - Review history if phenotype changes
- Beware of therapeutic trials for diagnosis
- Patient's hypothesis

Monthly headache diary

St George's Healthcare NHS
NHS Trust

Name: DOB:
Month: **Year:**

Date	**Day**	**Time**	**Severity** (1-10)	**Duration** (min / hrs)	**Nausea (N) / Vomiting (V)**	**Painkillers** (Name / Dose)	**Notes** (e.g. triggers, period, changes in preventatives, side effects etc.)
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Headache Service, Department of Neurology, St George's Hospital, Blackshaw Road, London SW17 0QT

Who should I be concerned about?

RCGPLearning
Essential CPD for primary care

Red Flags

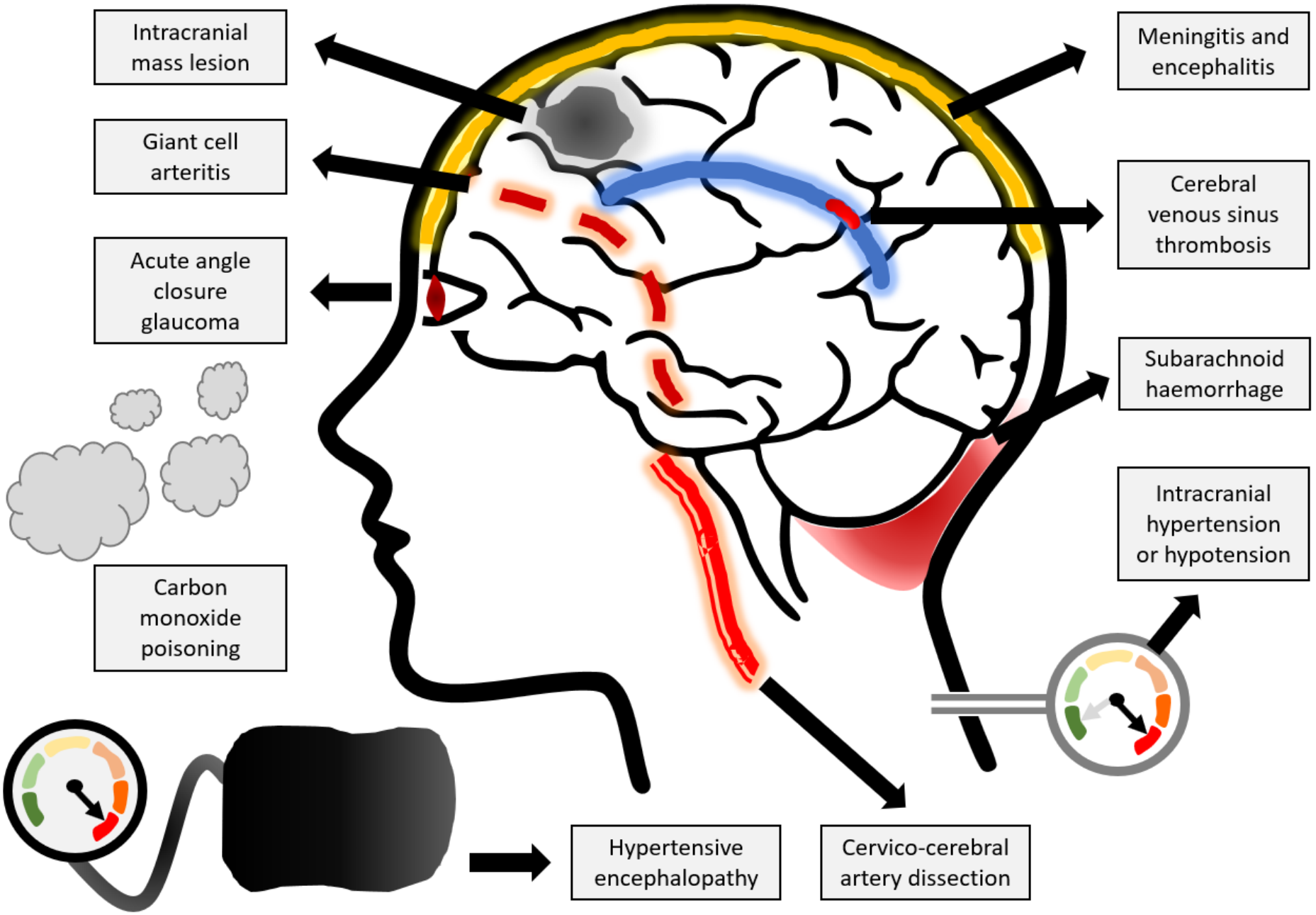
- Epidemiological features
  - New headache and patient > 50 yo (GCA / SOL)
  - Pregnant or recent post-partum
  - *Obesity (IIH)*
- Co-morbidity
  - Known cancer
  - Active immunodeficiency
  - Recent (<3m) Head Trauma
  - Family or past personal history of aneurysmal SAH

Red Flags

- Headache features
  - Thunderclap headache
  - Raised ICP features
  - New daily persistent headache
  - Headache on exertion
  - New headache with vomiting ++
  - Features of GCA / Acute Glaucoma
- Signs
  - Fever, confusion, drowsiness, neck stiffness
  - Any neurological signs

Secondary Headache Disorders

RCGPLearning
Essential CPD for primary care


Intracranial mass lesion
Giant cell arteritis
Acute angle closure glaucoma
Carbon monoxide poisoning
Meningitis and encephalitis
Cerebral venous sinus thrombosis
Subarachnoid haemorrhage
Intracranial hypertension or hypotension
Hypertensive encephalopathy
Cervico-cerebral artery dissection

Shouldn’t I have a scan doc?

- **Why do they want a scan?**

- Clear primary headache phenotype?
  - No!
- Features of brain tumour?
  - TWR
- Not sure what it is?
  - Review with diary
  - Refer, don’t scan
- “Just for reassurance” *(patient? doctor?)*
  - Incidental abnormalities are common
  - Reassurance doesn’t last
  - Reinforces false beliefs
  - Doesn’t manage symptoms

J Neurol (2010) 257:1274–1278
DOI 10.1007/s00415-010-5506-7

ORIGINAL COMMUNICATION

Imaging results in a consecutive series of 530 new patients in the Birmingham Headache Service

C. E. Clarke · J. Edwards · D. J. Nicholl · A. Sivaguru

- 5 year study – 3 neurologists
  - 3655 new patients with headache disorders
  - 530 (14.5%) were scanned
    - 46% had insignificant abnormalities on MRI
    - 28% on CT.
    - 11 (2.1%) had significant abnormalities.
    - When the neurologist suspected an abnormality 5.5% (1 in 20) had one.

Brain tumours

- Rare:
  - 10/100,000/y
- TWR criteria:
  - Subacute progressive neurological signs (including cognition / personality)
  - New seizures
  - Headache with above or raised ICP features

Brain tumours

- < 10% of brain tumours present with isolated headache
  - “featureless”
  - progressive and persistent
  - +/- raised ICP features
    - Early morning
    - Cough, sneeze, **strain *precipitates***
- Isolated headache in primary care?
  - < 0.05% probability of brain tumour
- Chronic headache? even *less* likely

36 year old male plumber

- Previously well. Presents to A&E.
- Complains of the worst headache of his life. Came on suddenly. Feels sick, but no vomiting. Wants the light off in the cubicle. Complains his neck hurts.
- His examination is normal.

Thunderclap Headache

- Sudden onset severe headache

  ≠ Thunderclap headache ≠SAH

- Maximum severity **within 5 minutes** (and lasts > 1 hour)
  - 10-25% of true thunderclap is SAH
  - <50% of SAH is isolated thunderclap

Thunderclap headache

- Differential is essentially vascular:
  - SAH
  - Cerebral Venous Sinus Thrombosis
  - Carotid dissection
  - Hypertensive encephalopathy
  - Pituitary apoplexy
  - Reversible Cerebral Vasoconstriction Syndrome
- *Primary headache disorders*
  - *Benign sex headache (coital cephalalgia)*
  - *Primary cough headache*
  - *Primary exertional headache*
  - *Primary thunderclap headache*

23 year old female student

- Feeling “grotty” for a few days
- 24 hour progressive history of headache, nausea, neck pain.

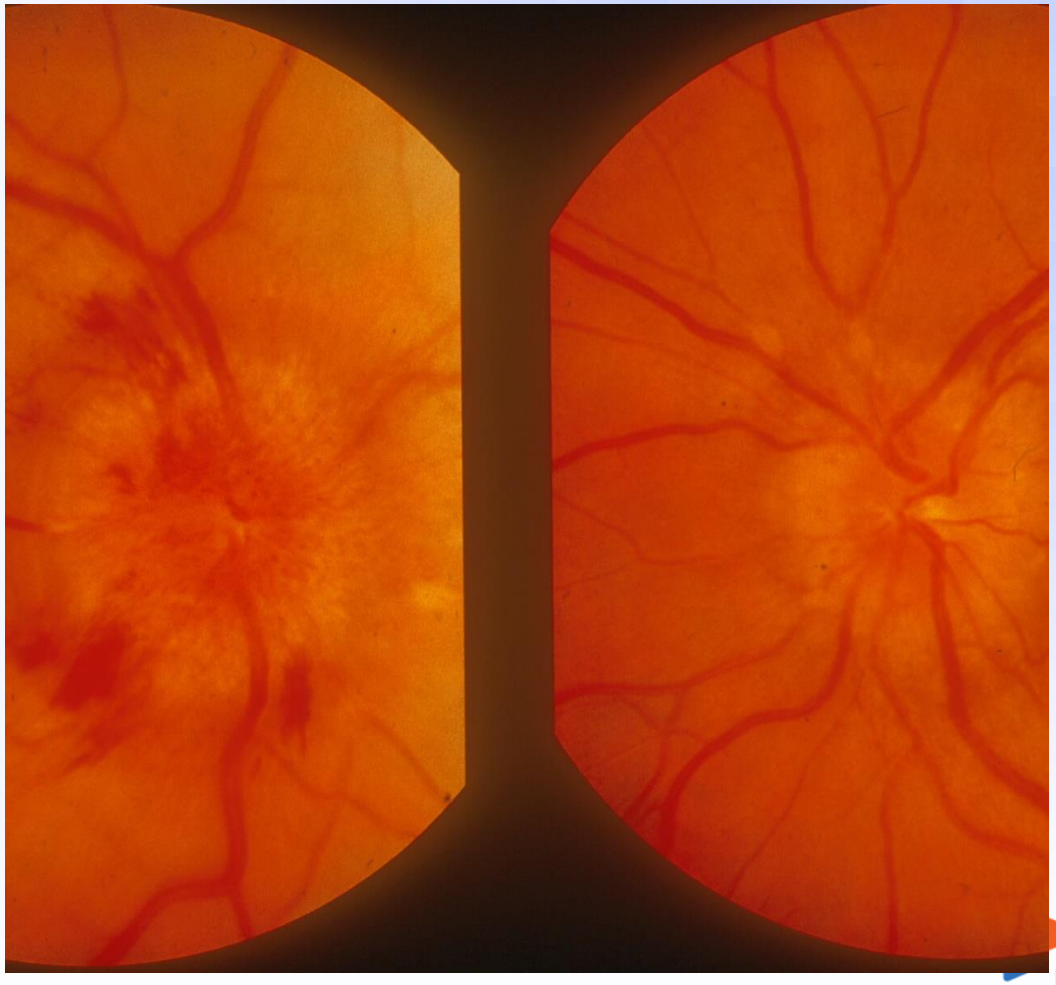
Acute bacterial meningitis

- Headache, with photophobia, nausea and vomiting occurs in 80-95%
- Apart from headache the key features are:
  - fever
  - neck stiffness
  - confusion
- Only 40% have all 3 but *absence of all 3 excludes bacterial meningitis with a 99% sensitivity*

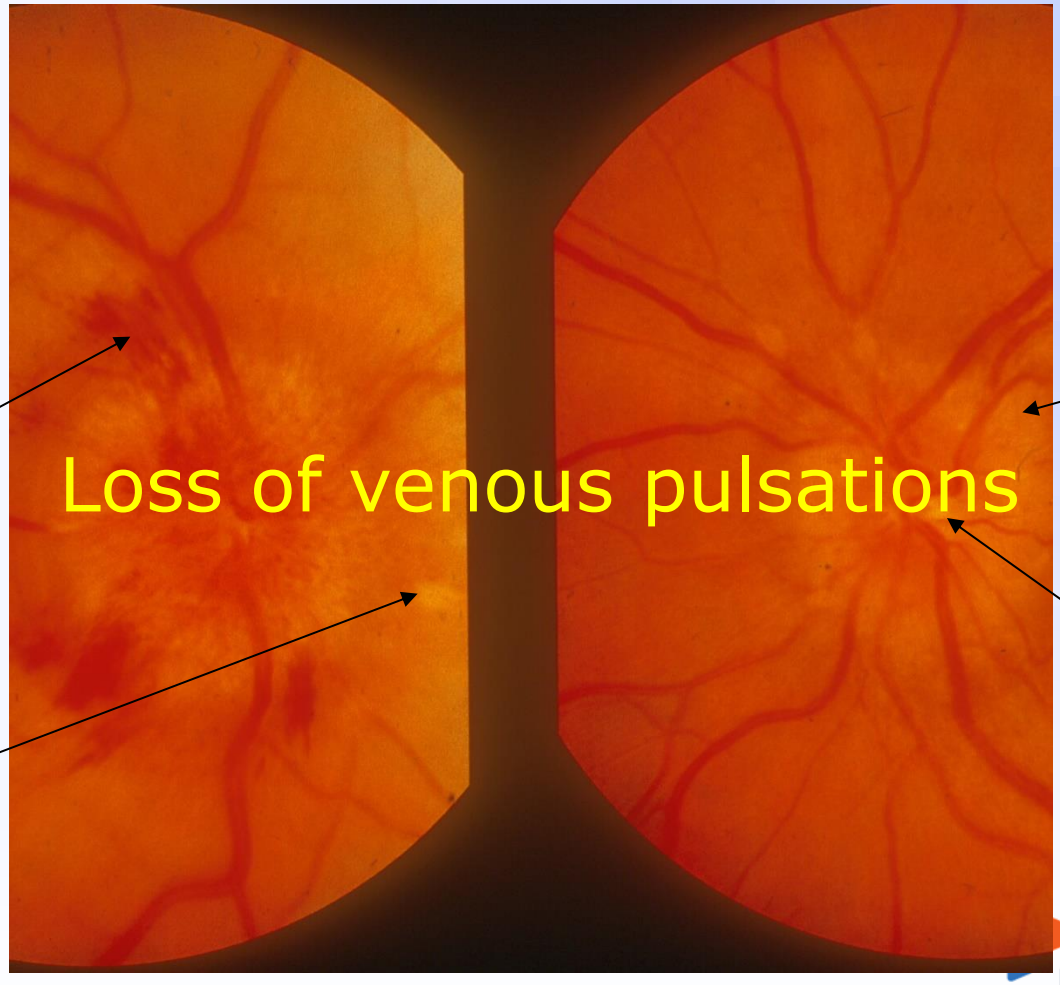
23 ♀, rapid onset of headache 2 weeks post-partum

- **Headache history**
  - Bifrontal throbbing headache, built up in 20 minutes out of the blue
  - Worse on coughing, sneezing and straining
  - Headache is 8/10 severity and persistent for last 3 days
- **Associated Symptoms**
  - Nausea, no vomiting
  - Vision sometimes “dims out”

23 ♀, rapid onset of headache 2 weeks post-partum



Papilloedema



Haemorrhages

Cotton wool spots

Blurred optic disc margin

Small optic cup

Cerebral Venous Sinus Thrombosis

- Headache
  - Present in 90% of patients,
  - often the presenting feature
  - the ONLY feature in 30%
  - Typically has raised pressure features
  - Can present as thunderclap
  - Untreated → complications (ICH, SAH, seizures, coning)
- Refer for urgent assessment and CT / MR venography
- In young, obese women with raised ICP headache and papilloedema consider **Idiopathic Intracranial Hypertension** *but* only after excluding CVST

65 ♀ with new onset headache

- **Headache history**
  - Generalised vague dull headaches, not localised
  - Can’t remember exact onset, “weeks”
  - Persistent but seem worse at night
  - No crystal clear days
  - Headache is 5/10 severity
- **Associated Symptoms**
  - Has felt generally under the weather and a bit depressed
  - Noticed a decrease in appetite and some weight loss
  - General weakness in the upper limbs
- **Antecedent headache history**
  - Mild tension-type headaches in 20s.

Giant Cell Arteritis

- **Headache features**
  - New onset headache in middle age / elderly **- can be any location**
  - Typically continuous and interferes with sleep
  - *Scalp tenderness is NOT specific or particularly sensitive*

- **Other features**
  - **Systemically unwell**
  - **Jaw claudication** (~50%)
    - occasionally intermittent claudication in the limbs or tongue
  - **visual loss in ~20%** (often early) if untreated
    - **sudden, bilateral visual loss can occur,** esp. in elderly
  - PMR in 50%, but muscle aches often not prominent

- **Tests**
  - ESR, CRP and FBC
    - ESR typically ≥ 50mm/h, CRP usually high, 50% anaemic

- **Treat if temporal tenderness, ESR > 50, CRP > 5**
  - Start steroids first (60mg od) and refer

Cervicogenic headache

- Headache with neck or scalp tenderness ≠ cervicogenic headache
- Overdiagnosed
  - Inappropriate referral to MSK
  - Undertreatment

- Key features
  - Restricted range of movement
  - Provocative manoeuvres reproduce

Primary Headache Disorders

RCGPLearning
Essential CPD for primary care

Primary Headache disorders

- Tension-type headache
- Migraine
- Trigeminal autonomic cephalalgias
  - e.g. cluster headache
- Other primary headaches are rare

- **Make a positive diagnosis**

Migraine – Management

- Clear, positive diagnosis and a clear plan
- Lifestyle / Triggers
  - Sleep
  - Caffeine
  - COC advice
- Abortive treatments
- Prophylactic therapy
- **Education & Self-management**
  - Give written information (Migraine Trust / Migraine Action)
  - Explore triggers / lifestyle issues
  - Headache Diary
  - Psychological Co-morbidity

Improving Migraine Management

- Underdiagnosis
  - Lack classic migrainous symptoms (especially in chronic migraine)
  - Absence of aura
  - Analgesia overuse
  - Episodic disabling headache is migraine
    - TTH / sinus headache very overdiagnosed
- Undermanaged
  - Propagation of analgesia overuse
  - Lack of patient education re: abortives
  - Prophylactic use – dose / duration of Rx

Migraine - Abortive

- Analgesics: **maximum 2 -3 days a week**
- **Treat hard, treat early**
  - NSAIDs
    - High dose, e.g.
      - 600-800 mg Ibuprofen
      - 900mg Aspirin
      - 500mg Naproxen
  - Triptans (not if CV disease)
    - Consider wafers, nasal, subcut in refractory patients
    - At least 3 attacks
    - Try all 7 if necessary
    - Don't use Triptan response for diagnosis
  - NSAID + Triptan is more effective
  - ***DON'T GIVE OPIATES*** *(or recommend OTC containing opiates, e.g. Migraleve)*
- Antiemetics
  - For **gastroparesis** ± nausea
  - domperidone *or* metoclopramide
- **Severe acute migraine with:**
  - sc sumatriptan / im diclofenac / im metoclopramide

Migraine - Prophylaxis

- If > 8 days a month
  - discuss if 4-8 days a month and major QoL impact
- Good RCT evidence for:
  - Propranolol (target 160mg total, up to 240mg)
  - Topiramate (target 100mg total, up to 200mg)
  - Amitryptiline (target 50mg total, up to 100mg)
  - Candesartan (target 16mg total, up to 32mg)
  - Pizotifen (1.5-3mg total)
  - *Valproate (up to 2000mg total)*

- High dose for minimum 2-3 months
- Analgesic overuse impacts prophylactic efficacy
- Target 50% reduction in headache severity or frequency
- Wean after ≥ 6 months of stability
- Failed 3 prophylactics? → Botox

Pure Menstrual Migraine

- Frovatriptan 2.5 mg bd or
- Naproxen 500mg bd

- From 3 days before for total 6 days

Migraine in Pregnancy

- Really bad morning sickness
- Worse in 1st TM, much better in TM2/3
- Worse after deliver / stopping breastfeeding

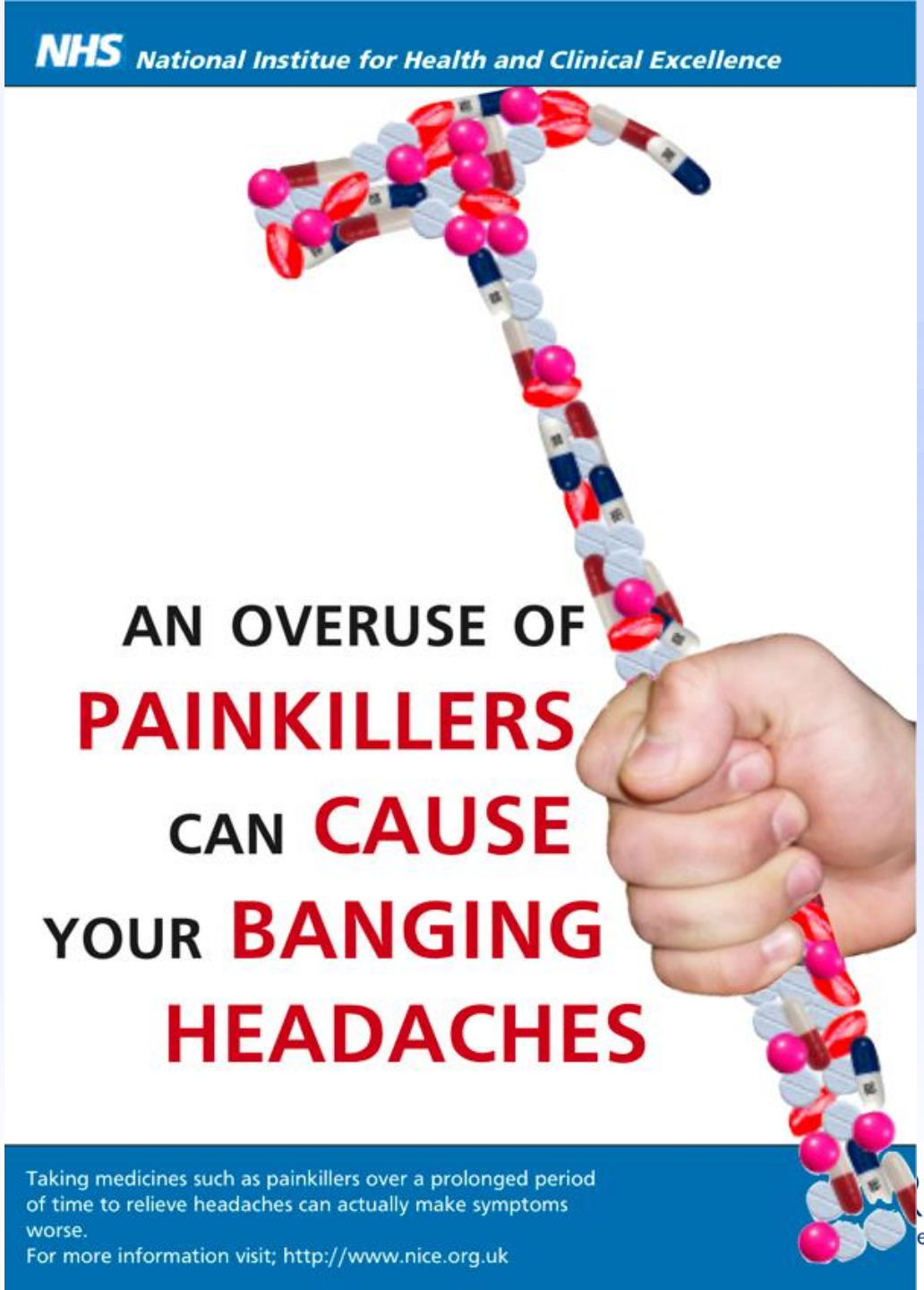
- Paracetamol
- NSAIDs 2nd TM only
- Triptans with caution

Cautions

- *Very* first episode of severe migrainous headache
  - Image it in the over 50s.
- Very rapid onset of Aura (<5 mins) and prolonged aura (>60 mins) are concerning
- Major change of phenotype *can* be a sign of additional pathology

35 year old male Accountant

- 5 months of bad bilateral headache, constant for 4 months - there all the time. Varies from 6-9/10 in severity. Feels sick with it, but otherwise featureless.
- Had migraines in his 20s, but very rarely since. When headache started 5 months ago it was a bit like his old migraine, but current headache is completely different.
- When these headaches started, they were not getting better with paracetamol or ibuprofen and now taking daily co-codamol from GP for the last 3 months with some acute relief.
- Examination is normal



Medication-Overuse Headache

- ***HUGE PROBLEM (1-2% of population)***

- ***Any*** patient, with ***any*** episodic primary headache disorder may develop chronic daily headache if given frequent analgesics
  - 10 - 15 /m paracetamol / NSAIDs
  - 8 -10 /m for triptans
  - 6 – 8 /m for opiates

Medication-Overuse Headache

- Increased severity and frequency
- Background headache
- Becomes featureless
- Prophylactics won't work!

- If you see patients with persistent headache on analgesics
  - Try "detox" –
    - "short sharp shock"
    - Wean opiates slowly
  - Limit 2 days per week
  - BAN opiates
  - Start prophylaxis for underlying primary HA

Chronic Daily Headache / Chronic Migraine

- >15 days a month of headache of any kind
  - *“8 days migrainous”*
- Overwhelmingly, most chronic headache is chronic migraine ± medication overuse headache

- Tips:
  - Always push about analgesic frequency
  - “Crystal clear days”
  - Severity at worst and best?
  - Number of days per week it is at its worst?
  - **Focus on the bad days** to identify migrainous features
  - Identify what the headache phenotype was like before “chronification”

Advanced Therapies

- Nerve blocks
  - > 60% response in chronic headache
- Botulinum toxin therapy
  - NICE approved for Chronic Migraine
  - Failed 3 prophylactics
- Transcranial Magnetic Stimulation
  - NICE IPG
- Implanted occipital nerve stimulation for intractable migraine
- CGRP Monoclonal Antibodies
  - NICE TA pending

Tension-type Headache

- *Defined by what it isn't*
- Mild, featureless, bilateral
- Rx
  - Paracetamol or NSAIDs ≤ 2 days pw
  - Explore Triggers / Psychological / Environmental
- Consider prophylaxis if frequent 8-15 days a month (risk of medication overuse headache)
  - Amitryptiline, Venlafaxine, Mirtazepine
- >15 days a month – think again
  - Migraine? Secondary disorder?

Cluster Headache

Cluster headache

- History:
  - Occurs in **clusters**
    - several attacks a day for weeks / months,
    - then remission
  - ***Strictly unilateral***
  - Excruciatingly severe, frontal / retro-orbital
  - Attacks shorter than migraine
    - **30 min – 4 hours**
    - **Up to 8 times a day**
  - Ultradian rhythms (more often at night)
  - Patients are ***restless*** (cf migraine)

- **Trigeminal autonomic features**
  - Ptosis, tearing, conjunctival injection, flushing, rhinorrhea

Cluster headache

- Acute treatment:
  - High flow O2 – aborts most attacks
    - **100% via non-rebreathe mask**
  - Sc sumatriptan 6mg
  - Nasal triptans may work (less effective)
  - Oral triptans do *not* work

- Prevention:
  - High dose prednisolone at cluster onset, tapering
  - Greater Occipital Nerve Block at start of a cluster
  - Start Verapamil (or Lithium / Topiramate)

Other primary headaches

- Occasional severe brief stabs?
  - Primary stabbing headache
- Waking up head feels like it exploded?
  Exploding head syndrome
- Short lasting, unilateral neuralgic headaches, with conjunctival injection and tearing?
  - SUNCT

Who to refer with primary headaches?

- Everyone with cluster headache and related disorders
- Refractory high frequency episodic migraine
  - Failed on 2-3 prophylactics
- Difficult chronic migraine (≥ 15 per month)
- Botox candidates (Chronic Migraine failed on 3 prophylactics)
- Not sure of diagnosis?
- Other comorbid headache disorder?
- Difficult to address analgesic overuse

Finally, a few headache myths

- Tension-type headache is not “caused by stress”
- Refractive error does not cause headache – it causes eyestrain
- Nearly 90% of patients with self or physician-diagnosed “sinus headache” have migraine.

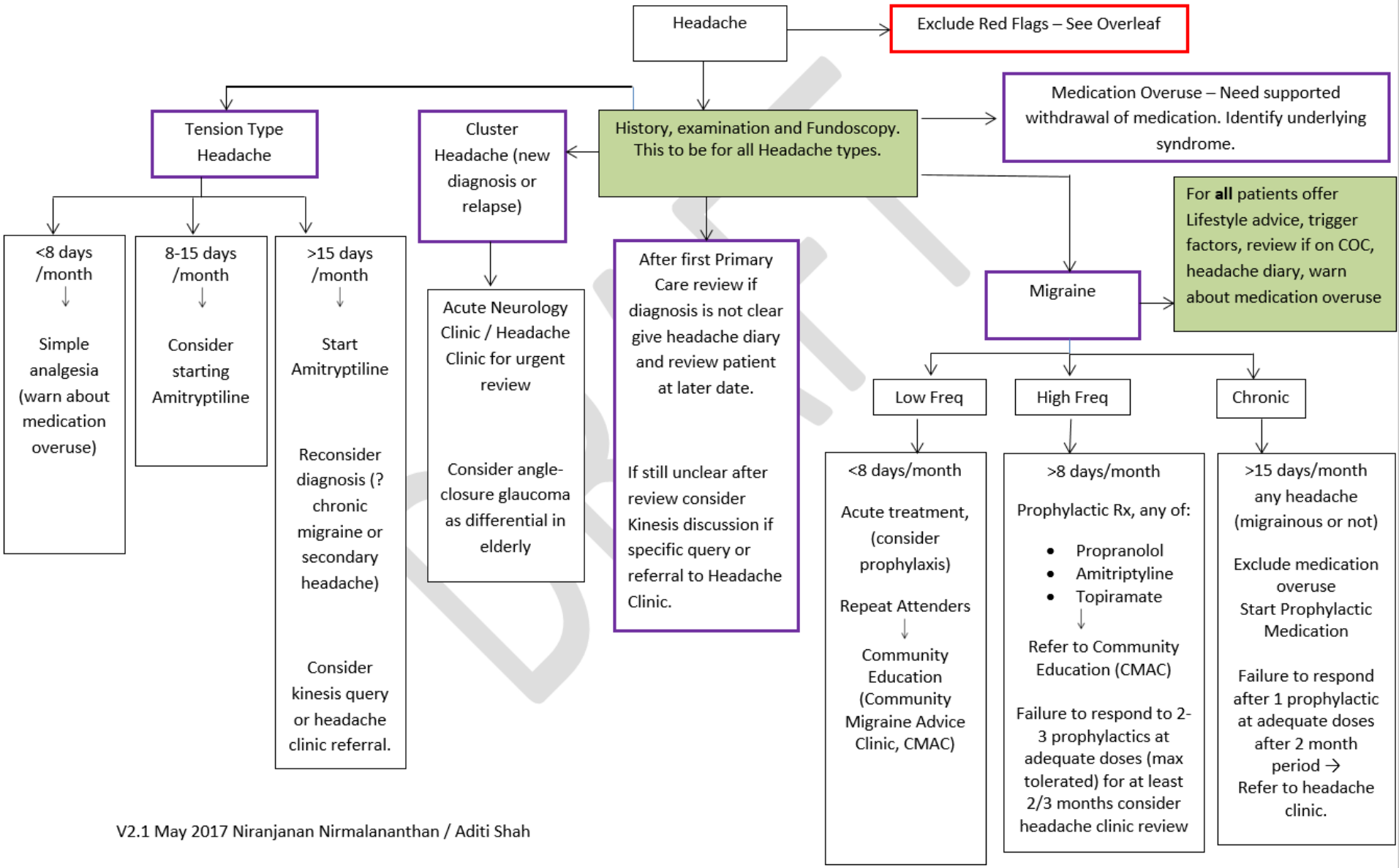
Headache Service, SGH

- Team
  - Dr Niran Nirmalananthan
  - Dr Usman Khan
  - Dr Bhavini Patel
  - Dr Katharine Pink
  - Dr Arani Nitkunan (IIH / GCA)
  - Ms Anne-Marie Logan
- Contact for advice:
  - Niran Nirmalananthan or Anne-Marie Logan
    - *via Kinesis*
- Urgent advice:
  - Neurology Registrar / Acute Neurology Team bleep 7277

Summary

- Headache in primary care is overwhelmingly benign and a positive diagnosis can be made
- Can usually be effectively managed in primary care
- Imaging needed in very few cases
- Refer, rather than scan, if uncertain

DRAFT : Wandsworth and Merton Primary Care Adult Headache Pathway



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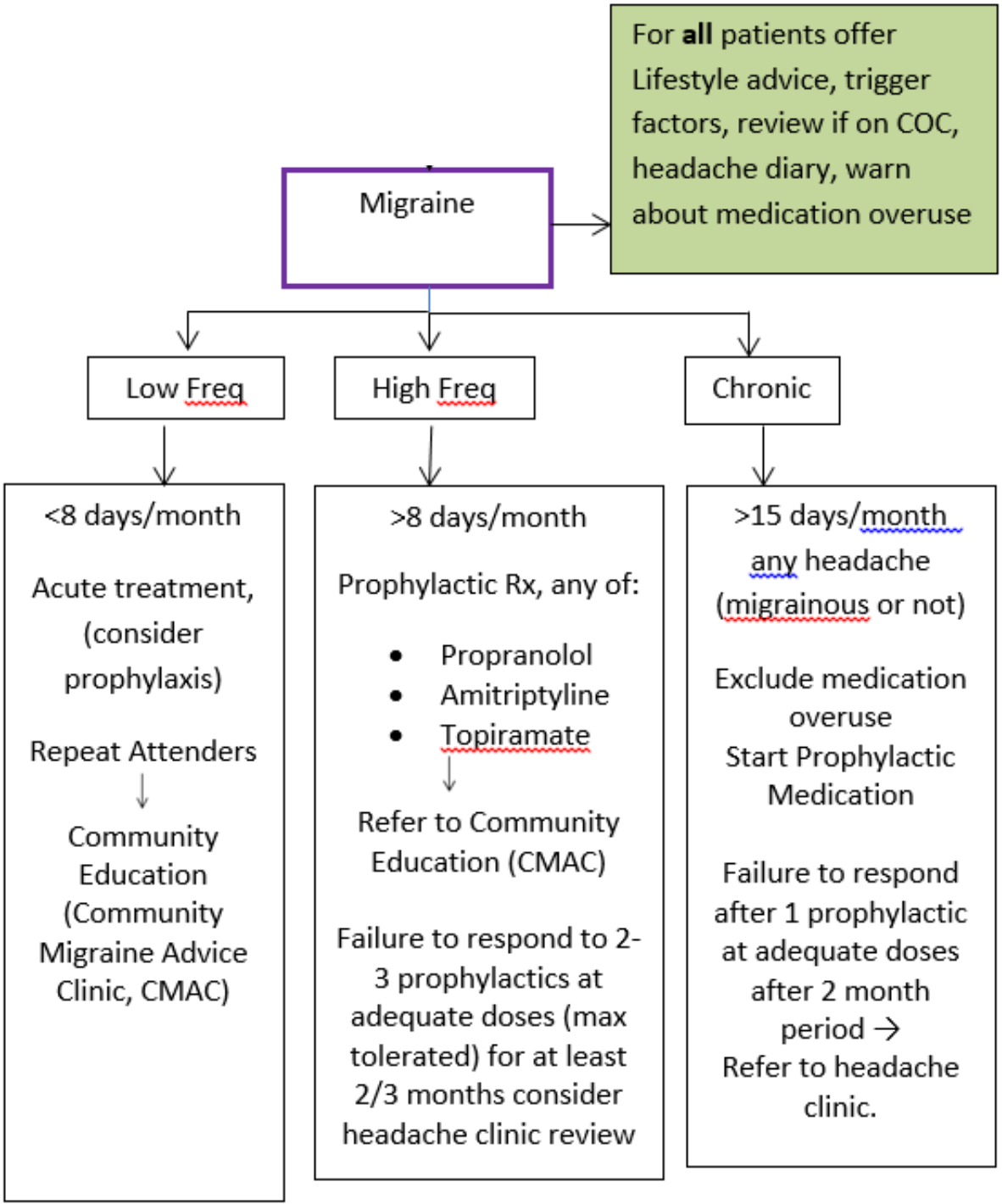
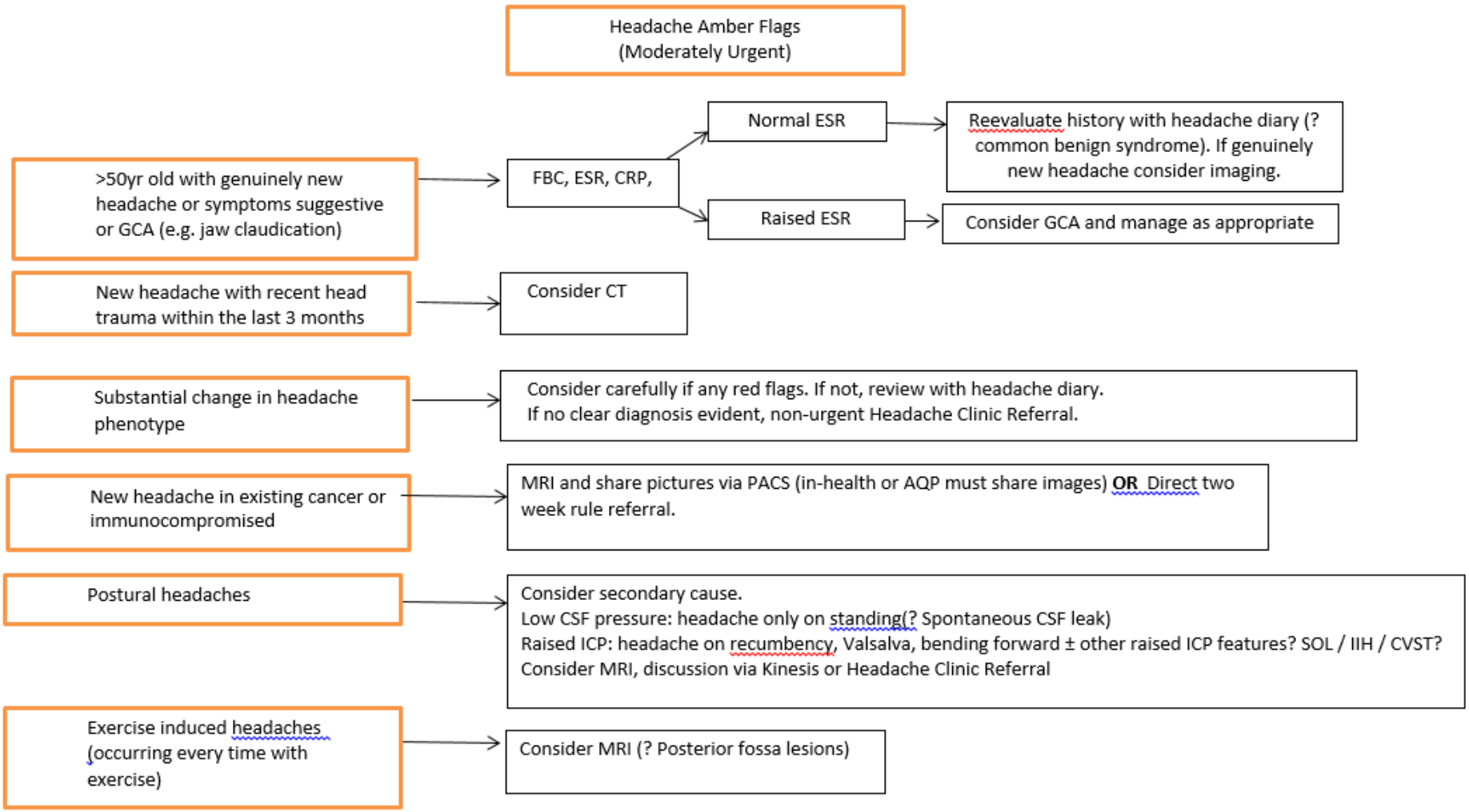

Migraine
For **all** patients offer Lifestyle advice, trigger factors, review if on COC, headache diary, warn about medication overuse
Low Freq
High Freq
Chronic
<8 days/month
Acute treatment, (consider prophylaxis)
Repeat Attenders
Community Education (Community Migraine Advice Clinic, CMAC)
>8 days/month
Prophylactic Rx, any of:
Propranolol
Amitriptyline
Topiramate
Refer to Community Education (CMAC)
Failure to respond to 2-3 prophylactics at adequate doses (max tolerated) for at least 2/3 months consider headache clinic review
>15 days/month any headache (migrainous or not)
Exclude medication overuse
Start Prophylactic Medication
Failure to respond after 1 prophylactic at adequate doses after 2 month period →
Refer to headache clinic.

DRAFT : Wandsworth and Merton Primary Care Adult Headache Pathway



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DRAFT : Headache Red Flags