Adult Headache Pathway

Nottinghamshire Area Prescribing Committee

- Do you have a headache all the time or does it come & go? (Tension Type Headache or Medicines Overuse Headache usually have pain all the time)
- If intermittent what do you do when you have the pain? (patients with migraine want to lie/sit still when pain is bad, those with cluster headaches can't sit still when having an attack)
- what tablets are you taking now and have you taken before?

Patient presents with headache

Take history & examine including BP, temporal arteries (if age > 50years) & fundoscopy

Exclude red flags

Red Flags - Headache that is new or unexpected in an individual patient

- Thunderclap headache (intense headache of "explosive" onset suggest SAH)
- Jaw claudication (suggests temporal arteritis - take ESR /CRP & start steroids immediately)
- Headache with atypical aura (duration >1 hour, or including significant / prolonged motor weakness)
- Headache associated with postural change (bending) or coughing (possible raised ICP)
- New onset headache in patient with history of cancer, especially if < 20 years
- Unilateral red eye – consider angle closure glaucoma
- Remember carbon monoxide poisoning (also causes lethargy + nausea)
- Rapid progression of sub-acute focal neurological deficit*
- Rapid progression of unexplained cognitive impairment / behavioural disturbance*
- Rapid progression of personality changes confirmed by witness where there is no reasonable explanation*
- New onset headache in a patient with a history of HIV / immunosuppression*
- New onset headache in a patient older than 50 years *
- Headache causing patients to wake from sleep*
- Progressive headache, worsening over weeks or longer*

Consider admission, urgent MRI scan (marked *) or 2ww referral as appropriate (direct access MRI not available in all CCGs)

Secondary headache - non serious cause

Posterior headaches often relate to cervicogenic headaches

Unlikely to be sinuses, TMJ dysfunction or teeth unless other signs /symptoms indicative of this

Consider medication – esp combined oral contraceptive pill (OCP). If patient has migraines with aura then OCP is contraindicated

Consider facial pain trigeminal neuralgia as a cause of 'headache'

Primary headache

The major types are listed below – it is important to realise however that patients may have more than one type, so can develop tension type headaches on underlying migraine, or medication overuse with tension type headaches
NICE recommends keeping a headache diary

Most people who attend their GP with recurrent / chronic headaches have migraine.

A recurrent severe headache associated with nausea and photophobia is 98% predictive of migraine

Migraine without aura

Diagnostic criteria - at least 5 attacks fulfilling criteria 1-4
1) Lasts 4-72 hours untreated
2) At least 2 of the following
   - Unilateral location
   - Pulsating quality
   - Moderate/severe pain
3) Nausea / vomiting and/or photophobia
4) No other cause identified

Chronic migraine with or without aura occurring everyday needs specialist review

Migraine with aura

Occurs in 1/3 of migraine sufferers
Aura 5-60 minutes prior to headache
Usually visual – note blurring & spots not diagnostic

Chronic migraine with or without aura occurring everyday needs specialist review

Tension type headache (TTH)

Usually episodic
Deemed chronic if >15days per month
Stress is common trigger but not always obvious

Can occur in combination with migraine and secondary headache triggers especially cervicogenic /neck problems

Medication Overuse Headache (MOH)

M:F (1:5 ratio)
Medication history is crucial especially use of over the counter analgesia

Can occur with other headache types
Prophylaxis medication doesn't help & can worsen

Cluster headache

Affects M:F (3:1 ratio)
Usually aged 20+ years
Bouts last 6-12 weeks.
Usually occur 1-2x year, often at same time of year.
Rarely chronic throughout year.
Very severe – often at night & lasts 30-60 minutes
Strictly unilateral
Ipsilateral conjunctival injection, rhinorrhea +/- Ptosis confirm

Migraine with / without aura

Step 1- For acute attacks simple analgesic & triptan – evidence suggest combination maybe best
- consider adding anti-emetic
- avoid opioids

Triptans – may need to try more than one type.
Care needed however as frequent use can lead to triptan overuse headaches (a form of MOH). Aim to use <2 doses/week. *(see notes)*
Use most cost-effective first
Also note migraines often return 48-72 hours post use of a triptan

Step 2 - consider rectal analgesic (diclofenac) & anti-emetic suppositories (domperidone) if nausea & vomiting, but be aware of recent MHRA guidance

If headaches are frequent &/or acute medication is used very frequently, prophylaxis should be considered. This should be titrated until control is gained and may take 6-8 weeks before beneficial effects are seen. Usually needs to be continued for at least 6 months before considering a trial without

Prophylaxis - 1st line (NB pizotifen now not recommended)
B blockers-propanolol 80-240mg in divided doses
Or
Amitriptyline before bed - initially small dose-10mg nocte, increasing to up to 150mg (NICE guidelines suggest poor evidence of efficacy)
Only use nortriptyline if amitriptyline effective but patient unable to tolerate side effects

2nd line Topiramate* - 25mg od to max 50mg bd (now recommended by NICE)
***Please see additional notes for license comments. Note topiramate is an enzyme inducer so care is needed with combined OCP/POP. Can cause foetal abnormalities - contra-indicated in pregnancy & in women of childbearing potential if not using effective methods of contraception.**

If no response consider value of MRI

Tension Type headache (TTH)

Step 1 - Simple analgesic (avoid opioids) along with explanation & reassurance. Look at triggers and consider medicine overuse headache (MOH)

Step 2 - consider alternative NSAID such as naproxen 500mg bd – maybe worthwhile taking regularly for a while if headaches are severe (with PPI cover if needed)

Step 3 - consider additional therapies eg acupuncture

Step 4 - if headaches severe, frequent & persist consider amitriptyline starting at low dose of 10mg at night, slowly increasing to 75-150mg

Note-B blockers not usually helpful & benzodiazepines should be avoided. SSRIs not helpful unless there is underlying depression

Can also consider TENS and cognitive therapies

Cluster headache

Most patients with new onset cluster headaches will require referral to a neurologist for advice.

Step 1- though short lived medication is nearly always needed (subcut sumatriptan is gold standard but consider intranasal triptan). Oxygen should only be prescribed if recommended by a neurologist (link to guidance).
Usually prophylaxis is the best option
Note- B blockers should not be used for cluster headaches

Step 2 - Prophylaxis
Prophylaxis dose should be increased rapidly; most sources suggest verapamil as first line
Verapamil 80mg tds starting dose then increase dose as prednisolone withdrawn
Prednisolone should be started at the same time as verapamil - 60-100mg daily for 5 days then decrease by 10mg every 3 days, so that treatment is discontinued after 2-3 weeks

Reconsider and exclude red flags again (see part 1). Also consider mixed headaches – Migraine & TTH and / or Medicine Overuse Headache

Consider whether MRI should be part of diagnostic process (where available)

NO - MRI not appropriate. Further advice needed about diagnosis or management

Yes and patient Accepts MRI scan

MRI SCAN

Abnormal MRI scan or patient not reassured despite normal MRI or need further advice

Normal MRI scan and patient reassured – continue with Rx – consider trials of higher dosages for longer periods

REFER

Remember - lifestyle measures may help

Medicine Overuse Headache (MOH)

- Only treatment is withdrawal.
- Education & communication is critical.
- Sometimes regular naproxen may be used in the early stages of withdrawal

Can occur on top of other types of headaches

Menstrual migraines can be identified via headache diary. May respond to hormonal Rx-see www.bash.org.uk

Care needed with pregnancy - these guidelines do not apply to pregnancy or children – see NICE & BASH guidelines at www.bash.org.uk

Don't forget patients often have more than one type of headache

Adult Headache Guideline

Nottingham and Nottinghamshire Adult Chronic Headache Pathway With Open Access to MRI Scanning

The following information is to support prescribers regarding the medicines aspects of the pathway, please refer to the BNF or Summary of Product Characteristics for further information on contraindications, precautions, adverse effects and interactions.

These guidelines have been developed using both British Association for the Study of Headache (BASH 2010) and NICE Headache (2012) guidelines.

Treatment of acute migraine

A stepped approach is often recommended commencing as early as possible with an analgesic and anti-emetics/pro-kinetic if required, and escalating to a 5HT1 receptor agonist (triptan) if this approach fails.

Aspirin or ibuprofen with or without paracetamol	Need to establish therapeutic levels quickly aspirin 600-900mg or ibuprofen 400-600mg paracetamol 1g
Metoclopramide or domperidone	metoclopramide 10mg or domperidone 20 mg
Aspirin plus metoclopramide	Aspirin 900mg plus Metocolopramide 10mg
Paracetamol plus metoclopramide	Paracetamol 500mg plus Metoclopramide 5mg
Domperidone and Diclofenac suppositories	Domperidone 30mg Diclofenac 50mg or 100mg – see notes below

Notes:

1. Please be aware of recent MHRA guidance on the use of anti-emetics and diclofenac. Links to the guidance is available through www.nottinghamshireformulary.nhs.uk
2. Drugs should be given as soon as the onset of an attack is recognised.
3. The addition of a gastric motility agent will aid gastric emptying, as well as relieving nausea.
4. Anti-migraine drugs containing Metoclopramide are not suitable for patients under the age of 20 years.
5. Since peristalsis is often reduced in migraine attacks, dispersible preparations may be helpful.
6. Suppositories are useful if vomiting or severe nausea present.

Triptans ($5HT_1$-receptor agonists)

Please see Nottinghamshire Formulary at www.nottinghamshireformulary.nhs.uk for further drug information. Try using the most cost-effective preparation first line, current Nottinghamshire formulary triptans are listed below.

Quicker onset of action, shorter half life		**Slower onset of action. Longer half life. Lower incidence of side effects and may be useful where recurrence is a problem**	
Sumatriptan (first line)	Tablets 50, 100mg Injection 6mg per 0.5ml Nasal spray 10mg or 20mg per 0.1ml/dose	Naratriptan	Tablet 2.5mg
Zolmitriptan	Tablets 2.5mg or Melts 2.5, 5mg Nasal spray 5mg per 0.1ml/dose	Frovatriptan	Tablet 2.5mg

Notes:

1. NICE recommends that oral triptans should be used first line and other preparations only considered if these are ineffective or not tolerated.
2. A second Triptan should not be taken if the first dose is ineffective.
3. Triptans are contraindicated in, uncontrolled hypertension, or risk factors for coronary heart disease or cerebral vascular disease.
4. Different Triptans have different profiles of 5HT site action. If the first Triptan tried fails, it is worth trying alternative ones. A pragmatic approach would be to choose the cheapest one from each group as a first line.
5. Wafer formulations obviate the need for water and do not get absorbed in mouth.
6. Nasal spray is useful when vomiting is a problem.

Prevention of migraine

Prophylaxis is used to reduce the number of attacks in circumstances when acute therapy, used appropriately, gives inadequate symptom control. There are no specific guidelines as to when prophylaxis should be commenced. Considerations include frequency, impact, failure of acute therapy, avoidance of medication overuse headache. The potential for teratogenic effects should be noted particularly with anti epileptic medications. In line with NICE recommendations these updated guidelines no longer include a recommendation to use pizotifen. Additionally propranolol is now recommended first line again in line with NICE recommendations and licensed indications.

Notes:

1. Propranolol, metoprolol and timolol are licensed. Atenolol has the advantage of once daily dosing and probably works as well.
2. Start at the lowest dose and build up gradually. Maintain the maximum tolerated dose for a minimum of 6 weeks before assessing. Discuss with patient at 6 months whether a gradual reduction and elimination of prophylactic medication might be considered.
3. Amitriptyline is useful with co-existent tension type headache, disturbed sleep or depression.
4. Note that gabapentin has the potential for abuse and is no longer recommended by NICE for prophylactic treatment of migraine.

Topiramate

Topiramate is licensed for migraine prophylaxis in adults, and it is now recommended for use in the NICE headache clinical guideline. Nottinghamshire Area Prescribing Committee has assigned topiramate as Amber 3 in the traffic light guidelines.

The SPC (summary of product characteristics) will have full information on cautions, contra-indications and side effects.

Place in therapy
This will be tailored to each patient, but as highlighted in the headache pathway, it should be considered when

- The frequency of migraines is such that regular prophylaxis is warranted
- A suitable trial of first line prophylactic medication (B blockers and/or amitriptyline) have failed to offer relief of symptoms
- Advise women of childbearing potential that topiramate is associated with a risk of foetal malformations and can impair the effectiveness of hormonal contraception. It is contraindicated in pregnancy and in women of childbearing potential if an effective method of contraception is not used.

Review
Continuing therapy should be reviewed every 6 months.

Dose
Note can take 6-8 weeks before maximum effect gained.

Commence topiramate at 25mg nightly, and increase (see below) if required.

Titration Schedule
The dosage should then be increased in increments of 25 mg/day administered at 1-week intervals. If the patient is unable to tolerate the titration regimen, longer intervals between dose adjustments can be used.

Some patients may experience a benefit at a total daily dose of 50 mg/day. The recommended total daily dose of topiramate as treatment for the prophylaxis of migraine headache is 100 mg/day administered in two divided doses. No extra benefit has been shown from the administration of doses higher than 100 mg/day.

Topiramate Dosage	Morning	Evening
Week 1		25mg
Week 2	25mg	25mg
Week 3	25mg	50mg
Week 4	50mg	50mg

Contraindications
Known hypersensitivity
Breast feeding
Pregnancy

Cautions
Avoid abrupt withdrawal
Hepatic impairment
Renal impairment
Topiramate has been associated with acute myopia with secondary angle closure glaucoma, typically occurring within 1 month of starting treatment. Choroidal effusions have also been reported. If raised intraocular pressures occur – seek ophthalmology advice and stop topiramate as rapidly as possible

Side Effects
Nausea, dyspepsia and diarrhoea
Dry mouth and taste disturbance
25% of people experience anorexia/loss of appetite
Drowsiness, insomnia, dizziness
50% of people experience initial paraesthesia (which usually settles)

Rarely - reduced sweating metabolic acidosis and alopecia
Very rarely - leucopenia, thrombocytopenia and serious skin reactions

Interactions
Oestrogens – metabolism accelerated – reduced contraceptive effect
Progestogens – metabolism accelerated – reduced contraceptive effect
Glibenclamide – possibly reduces plasma concentrations
Lithium – possibly affects plasma concentration

Costs (Drug Tariff and BNF November 2016)

Topiramate tablets
25mg x 60 £1.85
50mg x 60 £2.09

Topiramate sprinkle capsules (Topamax ®)
25mg x 60 £22.18
50mg x 60 £36.45

Topiramate tablets are now available generically and should be prescribed in preference to sprinkle capsules due to price difference.

For further information on contraindications, precautions, adverse effects and interactions refer to the BNF or Summary of Product Characteristics.

Adult Headache Guideline

Useful Resources – these guidelines have been developed using NICE and BASH guidelines below

1) NICE 2012 Headaches – Diagnosis and management of headaches in young people and adults. Clinical guideline 150

2) The British Association for the Study of Headache (BASH) are the main source of these guidelines, and they have more information at www.bash.org.uk/

3) Migraine in Primary Care Advisors is another useful web sit with guidance and information on further education www.mipca.org.uk/

4) The International Headache Society http://ihs-classification.org/en/

Self Help Resources

Patient UK – www.patient.co.uk

Migraine Action association http://www.migraine.org.uk/

Migraine Trust - http://www.migrainetrust.org/

Organization for the understanding of cluster headaches - http://www.ouchuk.org

NHS Choices http://www.nhs.uk/conditions/Headache/Pages/Introduction.aspx

---

About this Guideline

Original Authors & contributors in alphabetical order

Nikos Evangelou – consultant neurologist NUH
Rob Lenthall – consultant neuro-radiologist NUH
Alastair McLachlan – GP and clinical lead for NORCOMM
Tony Marsh – GP clinical Lead for NNE
Hugh Porter –GP and clinical lead for UNICOM
Guy Sawle consultant neurologist NUH
Adrian Wills – consultant neurologist NUH

Reviewed and updated 2016
Tanya Behrendt, Hugh Porter, Nikos Evangelou and Roger Knaggs in consultation with Nottinghamshire APC and member organisations.