Last Review: April 2019
Next Review: April 2020

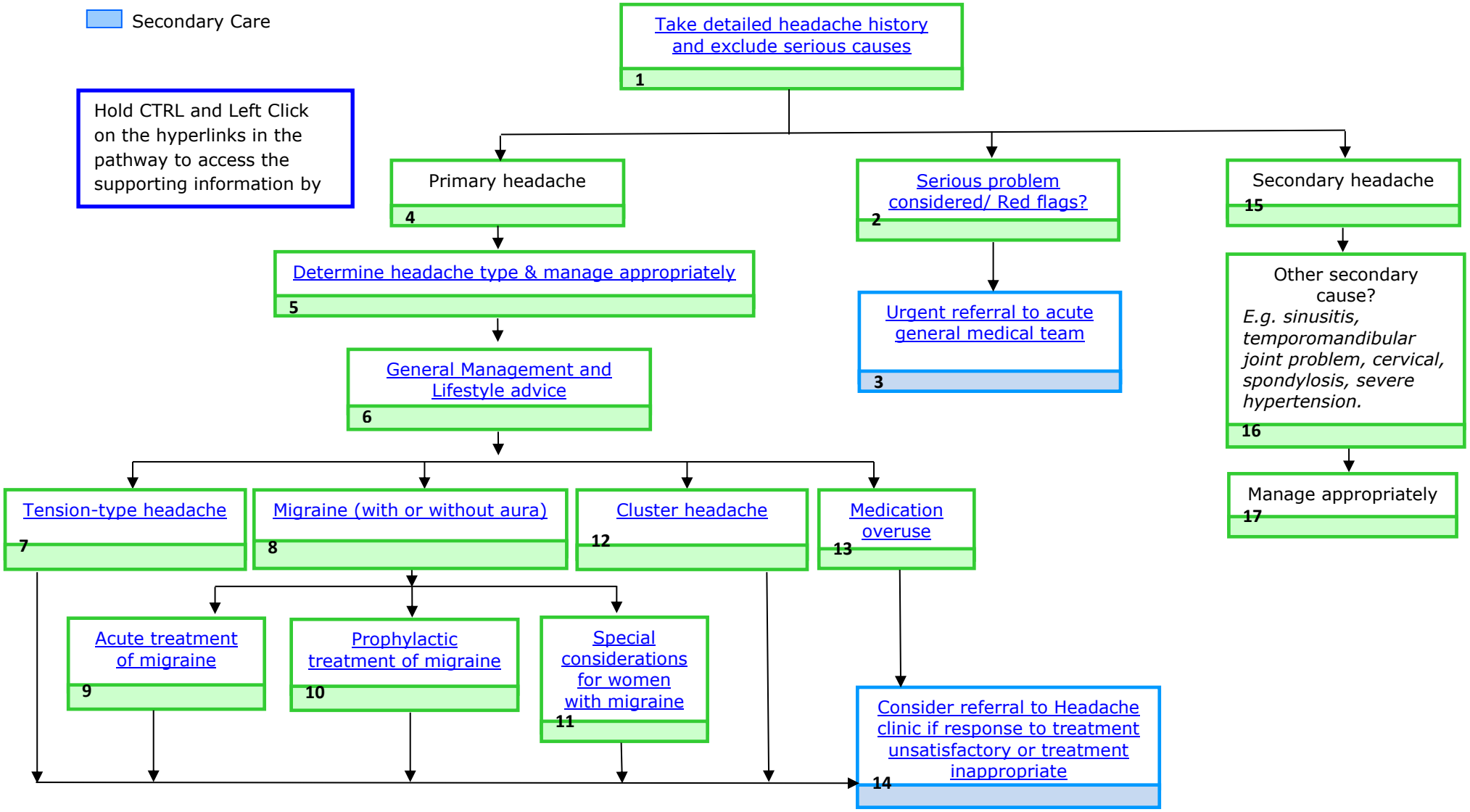
Key

Primary Care

Secondary Care

Headache Pathway for Adults
For patients presenting in Primary Care

Hold CTRL and Left Click on the hyperlinks in the pathway to access the supporting information by



1 Take detailed headache history and exclude serious causes

- Intermittent or daily/persistent?
- How often and for how long do headaches last?
- Special days, seasons and times of day?
- Triggering and relieving factors?
- Site, nature and severity of pain?
- Nausea, photophobia, phonophobia, osmophobia, diarrhoea?
- Have to keep still or is restless?
- Lifestyle, missing meals, snack food, fizzy caffeinated drinks?
- Medication: including acute and preventor headache medication, all OTC medication, frequency of analgesic use, use of oral contraceptive pill?
- **Serious problem considered/ Red flags**

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2 Serious problem considered/ Red flags?

Suggested brief checklist that will highlight worrying signs & symptoms of conditions such as temporal arteritis, subarachnoid haemorrhage, meningitis, cerebral tumour:

- Waking with headache?
- Vomiting?
- Is frequency increasing?
- Was it very sudden onset (i.e. reached maximal intensity within 5 minutes)?
- Is there scalp tenderness?
- New headache in patient aged over 50 years?
- Do Valsalva manoeuvres precipitate headache?
- Past history of cancer?
- Recent change in behaviour/personality?

Worrying focal neurological signs:

- Papilloedema?
- Visual field defect?
- Pupil asymmetry?
- Eye movement disorder?
- Gait or speech disturbance?
- Reflex asymmetry?

Suggested brief examination:

- Temporal arteries for tenderness/normal pulsation?
- Fundoscopy?
- Eye movements?
- Temperature?
- Neck stiffness?
- Skin rash?

Features of: Subarachnoid haemorrhage, meningitis, signs of raised intracranial pressure

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3 Urgent referral to acute medical team

IMAGING REFERRAL AND/OR URGENT REFERRAL TO APPROPRIATE SPECIALITY

4 Primary Headache

5 Determine headache type

Use findings from patient history and table below to determine headache type

Headache feature	Tension-type headache		Migraine (with or without aura)		Cluster headache	
Pain location[1]	Bilateral		Unilateral or bilateral		Unilateral (around the eye, above the eye and along the side of the head/face)	
Pain quality	Pressing/tightening (non-pulsating)		Pulsing (throbbing or banging in young people aged 12–17 years)		Variable (can be sharp, boring, burning, throbbing or tightening)	
Pain intensity	Mild or moderate		Moderate or severe		Severe or very severe	
Effect on activities	Not aggravated by routine activities of daily living		Aggravated by, or causes avoidance of, routine activities of daily living		Restlessness or agitation	
Other symptoms	None		Unusual sensitivity to light and/or sound or nausea and/or vomiting **Aura** Aura symptoms can occur with or without headache and: • are fully reversible • develop over at least 5 minutes • last 5–60 minutes. Typical aura symptoms include visual symptoms such as flickering lights, spots or lines and/or partial loss of vision; sensory symptoms such as numbness and/or pins and needles; and/or speech disturbance.		On the same side as the headache: • red and/or watery eye • nasal congestion and/or runny nose • swollen eyelid • forehead and facial sweating • constricted pupil and/or drooping eyelid	
Duration of headache	30 minutes–continuous		• 4–72 hours in adults • 1–72 hours in young people aged 12–17 years		15–180 minutes	
Frequency of headache	Less than 15 days per month	15 days per month or more for more than 3 months	Less than 15 days per month	15 days per month or more for more than 3 months	1 every other day to 8 per day[2], with remission[3] more than 1 month	1 every other day to 8 per day[2], with a continuous remission[3] less than 1 month in a 12-month period
Diagnosis	Episodic tension-type headache	Chronic tension-type headache[4]	Episodic migraine (with or without aura)	Chronic migraine (with or without aura)[5]	Episodic cluster headache	Chronic cluster headache

[1] Headache pain can be felt in the head, face or neck.
[2] The frequency of recurrent headaches during a cluster headache bout.
[3] The pain-free period between cluster headache bouts.
[4] Chronic migraine and chronic tension-type headache commonly overlap. If there are any features of migraine, diagnose chronic migraine.
[5] NICE has developed technology appraisal guidance on Botulinum toxin type A for the prevention of headaches in adults with chronic migraine (headaches on at least 15 days per month of which at least 8 days are with migraine). See prophylactic treatment in this pathway.

Source: NICE CG150, 2015

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6 General Management

For all headache disorders:

- Consider using a headache diary:
  - to record the frequency, duration and severity of headaches
  - to monitor the effectiveness of headache interventions
  - as a basis for discussion with the person about their headache disorder and its impact.
- Do not refer people diagnosed with tension-type headache, migraine, cluster headache or medication overuse headache for neuroimaging solely for reassurance
- Neuroimaging should only be considered for people with a first bout of cluster headache after discussion with neurologist or for those patients who have red flags *(see section 2 above).*

General lifestyle advice

- Encourage regular meals and fluid intake (avoid snack foods, missing meals and dehydration).
- Avoid excess alcohol, fizzy or caffeinated drinks.
- Recommend regular sleep and daily aerobic exercise e.g. walking, cycling (N.B. unaccustomed strenuous exercise can trigger a migraine).
- Avoid specific triggers (e.g. glare, stress, foods, drinks, travel, bright lights, loud noises).
- Encourage use of Headache Diaries & Stress management.

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7 Tension-type headache

Acute treatment of tension-type headache

- Give aspirin[1] 600mg – 900mg, an NSAID (ibuprofen 400mg / naproxen 250mg – 500mg) or paracetamol 500mg – 1g.
- Do not offer opioids (including codeine related products) for the acute treatment of tension-type headache
- Advise patient's on the risk of medication overuse headache. Be alert to the possibility of medication overuse headache in patients taking paracetamol, aspirin or an NSAID, either alone or in any combination, on 15 days per month or more for 3 months or more.

Management of chronic tension-type headache

- Treat any associated medication overuse headache
- NICE recommends considering a course of up to 10 sessions of acupuncture over 5–8 weeks for the prophylactic treatment of chronic tension-type headache.
- Acupuncture is currently not available on the NHS. However its use has been recommended by NICE and therefore clinicians should refer patients interested in pursuing this treatment to an appropriate source.
- There is currently a lack of evidence to recommend pharmacological prophylactic treatment for tension-type headaches, furthermore pure tension-type headache requiring prophylaxis is rare.

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8 Migraine (with or without aura)

9 Acute treatment of migraine

- **Do not** offer ergots or opioids (including codeine containing products) for the acute treatment of migraine
- **Do not** routinely offer combined hormonal contraceptives for contraception to women and girls who have migraine with aura.

First-line Treatment Options

- Combination therapy with an oral triptan[7] and an NSAID (ibuprofen 400mg / naproxen 250mg – 500mg) **or** an oral triptan[7] and paracetamol. For young people aged 12–17 years consider a nasal triptan[7] in preference to an oral triptan[7].
- For patients who prefer to take only one drug, consider monotherapy with an oral triptan[7] (Nasal triptan for young people aged 12-17 years), NSAID (ibuprofen 400mg / naproxen 250mg – 500mg), aspirin[1] (600mg - 900 mg) **or** paracetamol.
- Consider an anti-emetic (domperidone[8] 10mg TDS *[maximum 30mg daily and maximum of 7 days]* or metoclopramide[9] 10mg TDS *[maximum of 30mg daily and maximum of 5 days]*) in addition to other acute treatment for migraine even in the absence of nausea and vomiting.
- Do not offer ergots or opioids for the acute treatment of migraine.

Second-line Treatment Options

- For patients in whom oral preparations (or nasal preparations in young people aged 12–17 years) for the acute treatment of migraine are ineffective or not tolerated:
  - Offer a non-oral preparation of metoclopramide[9] *[maximum of 5 days]* or prochlorperazine **and**
  - Consider adding a non-oral NSAID (diclofenac 100mg suppository or 75mgs IM) **or** triptan[7] (subcutaneous sumatriptan 6mg) if these have not been tried.

Choice and use of triptans[2]

- Sumatriptan 50mg (increased to 100mg if required) should be the first-line oral triptan of choice.
- Generic naratriptan, rizatriptan, zolmitriptan and frovatriptan are alternative second-line options.
- Nasal Sumatriptan is the presferred triptan in young people aged 12-17 years.
- There is insufficient evidence to recommend the routine use of dispersible preparations except in patients with swallowing difficulties. However where a dispersible preparation is indicated generic orodispersible zolmitriptan 2.5mg should be the first-line choice.
- Generic orodispersible rizatriptan is an alternative second-line option.
- If the first triptan in ineffective, try one or more alternative triptans.
- Ideally each triptan should be tried in three attacks before it is rejected for lack of efficacy.
- Intranasal sumatriptan is not generally recommended if there is vomiting, as it is absorbed through the oral route; if a nasal spray is indicated intranasal zolmitriptan may be a better option as about 30% is absorbed through the nasal mucosa.
- Triptans should be taken at/soon after, the onset of headache phase of the attack.

Triptans prescribing aid April 19.pdf

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10 Prophylactic treatment of migraine

- Discuss the benefits and risks of prophylactic treatment for migraine with the patient.
- Review the need for continuing migraine prophylaxis 6 months after the start of prophylactic treatment.
- Combination therapy may be required under **specialist supervision**.

First-line Treatment Options

- Propranolol (80mg-240mg daily in divided doses) **or** topiramate[10] should be offered first-line for the prophylactic treatment of migraine. **Specialist advice** should be sought prior to initiating topiramate[10].
- Women and girls of childbearing potential should be advised that topiramate is associated with a risk of fetal malformations and can impair the effectiveness of hormonal contraceptives. Ensure they are offered suitable contraception.
- Topiramate has been associated with acute myopia with secondary angle-closure glaucoma, typically occurring within one month of starting treatment. Choroidal effusions resulting in anterior displacement of the lens and iris have also been reported. If raised intra-ocular pressure occurs:
    - Seek specialist ophthalmological advice
    - Use appropriate measures to reduce intra-ocular pressure
    - Stop topiramate as rapidly as feasible.
- Amitriptyline may be considered as a treatment option according to patient preference, co-morbidities and risk of adverse effects.
    - Consider the additional antimuscarinic burden of amitriptyline when prescribing in the frail elderly and those with polypharmacy.

Second-line Treatment Options

- A course of up to 10 sessions of acupuncture over 5–8 weeks can be considered as a second-line treatment option where topiramate and propranolol are unsuitable or ineffective.
- Acupuncture is currently not available on the NHS. However, its use has been recommended by NICE and therefore clinicians should refer patients interested in pursuing this treatment to an appropriate source.
- Patients already receiving treatment with another form of prophylaxis, and whose migraine is well controlled, should continue their current treatment as required.

Patients already receiving prophylactic treatment

Patients already receiving treatment with another form of prophylaxis, and whose migraine is well controlled, should continue their current treatment as required.

Updated guidance on gabapentin

- An update to the NICE guidance in 2015 rejected the use of gabapentin for the prophylactic treatment of migraine following a review of the evidence.
- Where patients are already established on gabapentin[11] for migraine prophylaxis to good effect, this treatment may be continued as required.

Frequency of review

- Review the need for continuing migraine prophylaxis after 6 months.

Also consider

- Riboflavin[12] (400mg once a day) may be effective in reducing migraine frequency and intensity for some patients. Advise patients this is not prescribable and can be purchased from pharmacies / health food stores.

Botulinum toxin

Botulinum toxin type A is recommended following **clinical decision by specialist service only** as an option for the prophylaxis of headaches in adults with chronic migraine (defined as headaches on at least 15 days per month of which at least 8 days are with migraine) under the following circumstances:

- Where there has been no response to at least three prior pharmacological prophylaxis therapies **and**
- The patient's condition is appropriately managed for medication overuse.

Patients should be referred to a specialist headache clinic to decide if treatment with botulinum toxin type A is appropriate.

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11 Special considerations for women with migraine

Menstrual-related migraine

- Acute menstrual-related migraine should be treated as per standard drug management for acute migraine.
- For women and girls with predictable menstrual-related migraine that **does not respond** adequately to standard acute treatment, consider treatment with frovatriptan[5] (2.5 mg twice a day) or zolmitriptan[6] (2.5 mg twice or three times a day) on the days migraine is expected.

Combined hormonal contraceptive use

- **Do not** routinely offer combined hormonal contraceptives for contraception to women and girls who have migraine with aura.

Treatment of migraine during pregnancy

- Offer pregnant women paracetamol for the acute treatment of migraine.
- A triptan[7] or NSAID can be considered; however triptans[7] should be avoided unless the benefits outweigh the risks as there is limited knowledge on their use in pregnancy. NSAIDs must not be given in the third trimester.
- Clinicians should discuss with women the need for treatment and the risks associated with the use of each medication during pregnancy.
- **Seek specialist advice** if prophylactic treatment for migraine is needed during pregnancy
- http://www.medicinesinpregnancy.org/

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12 Cluster headache

Acute treatment of cluster headache

Treatment only needed during cluster bouts:

- Give oxygen at 100% and / or sumatriptan 6mg subcutaneous injection.[2]
- Use the pre-populated HOOF to order static cylinders.
- Nasal zolmitriptan 5-10mg[3] or nasal sumatriptan 10 - 20mg[4] can be considered in patients who cannot tolerate subcutaneous sumatriptan.
  N.B *nasal zolmitriptan[3] has delayed bioavailability and nasal sumatriptan[4] may have little place in clinical practice for the treatment of acute cluster headache.*

- When using a subcutaneous or nasal triptan, ensure the patient is offered an adequate supply of triptans calculated according to their history of cluster bouts, based on the manufacturer's maximum daily dose.
  N.B *patients may experience cluster headaches on a daily basis; therefore significant quantities of non-oral triptans may be required (consider the use of weekly scripts to avoid waste).*
- Do not offer paracetamol, NSAIDS, opioids, ergots or oral triptans for the acute treatment of cluster headache.

Triptans prescribing aid April 19.pdf

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Prophylactic treatment of cluster headache

The aim of prophylactic therapy is to reduce the frequency, severity and duration of attacks with minimal side effects during a cluster bout and to induce/or lengthen remission periods. Prophylactic therapies are usually started at the onset of a cluster bout and continued until the bout is over.

- Verapamil (dosing varies from 80mg to 960mg daily in divided doses depending on patient response) can be considered as prophylactic treatment during a bout of cluster headache. If unfamiliar with the use of verapamil for cluster headache, seek **specialist advice** before starting treatment, including advice on electrocardiogram (ECG) monitoring.
  N.B *ECG should be undertaken before treatment, prior to each dose increase and every 6 months once stable.*
  Prescribe on Specialist advice only
- Oral prednisolone can be initiated at the same time as verapamil to provide immediate relief of a cluster bout until the prophylactic effect of verapamil is achieved. **Specialist advice** should be sought before initiating oral prednisolone.
- Suggested prednisolone dosage regime based on specialist advice:

Day of treatment	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Prednisolone dose	60mg	60mg	60mg	50mg	50mg	50mg	40mg	40mg	40mg
Day of treatment	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Prednisolone dose	30mg	30mg	30mg	20mg	20mg	20mg	10mg	10mg	10mg **THEN STOP**

- Seek **specialist advice** for cluster headache that does not respond to verapamil
- Seek **specialist advice** if treatment for cluster headache is needed during pregnancy.

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13 Medication overuse headache

Medication overuse headache can develop with any type of primary headache but most commonly develops with migraine.

Be alert to the possibility of medication overuse headache in patients whose headache developed or worsened while they were taking the following drugs for 3 months or more:

- triptans, opioids, ergots or combination analgesic medications on 10 days per month or more **or**
- paracetamol, aspirin or an NSAID, either alone or in any combination, on 15 days per month or more.

Management of medication overuse headache

- Advise patients to stop taking all overused acute headache medications for at least 1 month and to stop abruptly rather than gradually where possible.
- Advise patients that headache symptoms are likely to get worse in the short term before they improve
- Warn patients that there is the potential for associated withdrawal symptoms especially if opioids are used.
- Provide patients with close follow-up and support according to their needs.
- Consider prophylactic treatment for the underlying primary headache disorder in addition to withdrawal of overused medication for patients with medication overuse headache.
- Do not routinely offer inpatient withdrawal for medication overuse headache; however **specialist referral and/or inpatient withdrawal** may be required for patients using strong opioids, those with relevant comorbidities or previous repeated unsuccessful attempts to withdraw.
- Review the diagnosis of medication overuse headache and further management 4–8 weeks after the start of withdrawal of overused medication.

Medication Overuse Headache PIL V5.pdf

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14 Headache Clinic Referral

Headache Referral Response GP v5.doc

Notes

All drug dosages regimes suggested throughout this pathway are for use in adults unless otherwise stated.

Use of unlicensed preparations: *The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The patient (or their parent or carer) should provide informed consent, which should be documented. See the General Medical Council's* ***Good practice in prescribing medicines – guidance for doctors*** *and the* ***prescribing advice*** *provided by the Joint Standing Committee on Medicines (a joint committee of the Royal College of Paediatrics and Child Health and the Neonatal and Paediatric Pharmacists Group) for further information.*

[1] Due to an association with Reye's syndrome, preparations containing aspirin should not be given to people aged under 16 years.
[2] At the time of writing, subcutaneous sumatriptan did not have a licence for use in patients aged under 18 years.
[3] At the time of writing, nasal zolmitriptan did not have a licence for the treatment of cluster headaches and is unlicensed for use in patients under 18 years of age.
[4] At the time of writing, nasal sumatriptan did not have a licence for the treatment of cluster headaches.

[5] *At the time of writing frovatriptan did not have license for the treatment of menstrual-related migraines as discussed above.*
[6] *At the time of writing zolmitriptan did not have license for the treatment of menstrual-related migraines as discussed above.*
[7] *At the time of writing, triptans (except nasal sumatriptan) did not have a licence for use in patients aged under 18 years.*
[8] *Following concerns surrounding its effects on the heart, domperidone should not be used by people who have serious underlying heart conditions: MHRA Press Release and EMA Press Release has recommended that the maximum oral dose of domperidone in adults is reduced to 10mg three times a day and its use restricted to a maximum of one week. Domperidone is less sedating and creates less risk of extrapyramidal side effects.*
[9] *An MHRA Drug Safety Update concluded that the risks outweigh the benefits in long-term or high-dose treatment with metoclopramide due to the risk of neurological effects. For adults over 18 years the maximum dose is 30mg/day (or 0.5mg/kg) for up to 5 days. The MHRA do not recommend the use of metoclopramide for symptomatic treatment of nausea and vomiting, including that associated with acute migraine, in children age 1-18 years.*
[10] *At the time of writing, topiramate did not have a licence for use in patients aged under 18 years for migraine prophylaxis.*
[11] *At the time of writing, gabapentin did not have a licence for the treatment of migraine prophylaxis.*
[12] *At the time of writing riboflavin is an unlicensed food supplement.*

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