Management of Migraine

Introduction

Migraine is the main cause of high impact headache and affects 7.6% of males, 18.3% of females and 12% of children. Unfortunately, the majority of sufferers are reluctant to seek help and when they do the condition is less than optimally managed. Migraine is co-morbid with depression and anxiety disorders, epilepsy and asthma.

Making the diagnosis

Migraine is the most common headache presentation in primary care. Although the International Headache Society criteria (see figure 1) are quite specific, from a clinical perspective they may be relaxed. Answering yes to two out of three simple questions effectively identifies migraine sufferers:

- Has a headache limited your activities for a day or more in the last three months?
- Are you nauseated or sick to your stomach when you have a headache?
- Does light bother you when you have a headache?

a) At least 5 attacks fulfilling criteria b-d
b) Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
c) Headache has at least two of the following characteristics:
- Unilateral location
- Pulsating quality
- Moderate or severe pain intensity
- Aggravating or causing avoidance of routine physical activity

d) During headache, at least one of the following:
- Nausea and or vomiting
- Photophobia or phonophobia

e) Not attributed to other disorder (A formal diagnosis of migraine therefore must include an examination to exclude another disorder.)

Fig 1. Formal criteria for a migraine diagnosis. Can be relaxed in practice.

The stages of migraine

- *Prodrome*. 30-50% of migraineurs – sensory or psychological features that can occur up to 48 hours prior to attack. Prodrome, e.g. craving for a particular food can be confused with a trigger.
- *Aura*. 30% of migraineurs – a reversible sensory or motor phenomena of cortex or less commonly brainstem lasting under 60 minutes. Visual auras are the most common followed by parasthesie. Atypical auras can occur, e.g. vertigo, hemiplegia. Aura can occur in the absence of headache. As they are caused by a spreading cortical depression, their evolution with time distinguishes from T.I.A.
- *Headache*. 60% unilateral, throbbing or pulsating. Associated with nausea or vomiting, photophobia or phonophobia. Increased skin sensation can also occur.
- *Postdrome* – tiredness, elation.

Migraine triggers

- Often inconsistent. The importance of allergy remains unproven.
- The <u>often unrecognised trigger is sensitivity to change</u>. E.g. glucose, hydration, stress, oestrogen, sleep patterns – keep everything as constant as possible.

Pathogenesis

- Poorly understood. Mid brain migraine generator activates trigeminal system which causes dural inflammation and pain.
- Migraine generator close to nausea and vomiting centre. Gastric stasis and inhibition of drug absorption major problem.
- Migraine generator overlaps nuclei of upper cervical nerves. Neck and shoulder pain common in migraineurs and probably represents efferent signals and not primary neck problem.

The emergency call out

- Parenteral sumatriptan treatment of choice.
- IM diclofenac 50mg with IM antiemetic second line.
- Avoid opiates. Dependency soon develops

Management of the acute attack

- A useful first line of treatment that can be bought cheaply OTC, all of which should be taken together is: Buccastem, Paracetamol and Aspirin. (See patient information sheet). Soluble preparations act quicker. Can be taken prior to Triptan. Larger initial doses may reach therapeutic levels quicker providing maximum daily doses are not exceeded.

- If vomiting or severe nausea use Stemetil suppositories 30mg and Diclofenac suppositories 100mg.
- Triptans. Cornerstone of the acute attack. See figure 2. Nasal forms (Sumatriptan and Zolmitriptan) useful when gastric stasis is a problem or injectable (Sumatriptan) for intractable cases. Wafer formulations (Zolmitriptan and Rizatriptan) are <u>for convenience only and not absorbed through the oral mucosa.</u> Sumatriptan 50mg is now available OTC. <u>Failure of response to Triptans is not a class effect. If one doesn't work try another.</u> Treat at onset of pain. May not be effective if taken during aura phase. More effective if taken with anti emetic. Vascular disease an absolute contraindication.
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Group A (Higher speed onset)	Group B (Lower headache recurrence, lower side effect profile)
Sumatriptan 100/50mg	Naratriptan 2.5mg
Rizatriptan 10/5mg	Frovatriptan 2.5mg
Zolmitriptan 2.5mg	
Almotriptan 12.5mg	Eletriptan 20mg/40mg

Figure 2 - Available Triptans

Preventative treatment

- No specific indications for using preventative treatment. The impact upon the patient is the best guide.
- Preventative medication should be given for at least 8 weeks at its maximum tolerated dose before its impact should be assessed and if successful continued for at least 6 months.
- Beta-blockers are the drug of first choice and Propranolol, Metoprolol, Timolol and Nadolol are licensed for use in migraine. Atenolol 25 mg increasing to 100mg or the highest tolerable dose appears effective, is cheap and convenient to take. Nebivolol is a useful if side-effects are problematic.
- Amitriptyline 10mg increasing to 100mg or the highest tolerable dose is the preventative medication of second choice. Works well with a beta-blocker.

- Anti-epilepsy drugs form the third line choices. Topiramate (licensed) has the best evidence base. Sodium valproate (un-licensed) is often used but caution in females (see information sheet on the use of Sodium Valproate in females). Gabapentin and Lamotrigine are sometimes used but are not supported by evidence.
- Candesartan (un-licensed) is increasingly used.
- Although licensed Sanomigran is generally ineffective in adults (but effective in children) but weight gain can be troublesome.

Alternative treatments (See patient information sheets on alternative medicines)

- Physical therapies such as biofeedback, relaxation therapy, cervical manipulation, and cranial massage have are not supported by firm evidence.
- Positive trials have been reported on acupuncture but have been criticised on methodological grounds.
- Butterbur, Feverfew, Co-Enzyme Q10 and Magnesium have a weak evidence base (see patient information sheet)

Migraine in women (See patient information sheets on alternative medicines)

- Avoid combined oral contraception with aura or migraine without aura with other vascular risk factors.
- Look for hormone sensitive migraine. Perimenstrual options if preventative medication is not relevant (Mefenamic acid or Naproxen –2d to +2d; transcutaneous oestrogen gel 1.5g/day –5d to +2d; Frovatriptan 2.5mg/day –2d to+4d. Perimenopausal (low dose HRT, not oral). Alternatively if no aura and option is continuous combined contraception
- The majority of women get fewer migraines in pregnancy.
- Perimenopausal migraine can be problematic with fluctuating oestrogen levels. HRT can be useful if there are other symptoms but not tablets. (See patient information sheet). Migraine with aura is not a contraindication to HRT.