Migraine Fact Sheet

Key Facts

- Migraine affects 11% of the world's population.
- It is a painful headache often associated with nausea, vomiting, visual disturbances, over- sensitivity to sound or light.
- Migraine causes significant burden to the individual in terms of pain, disability, damaged quality of life and inability to work.
- The societal burden of migraine is under-recognized, despite costing an estimated €27 billion per year in Europe alone.

What is migraine?

Migraine is a painful and often disabling condition which is one of a number of primary headache disorders. It also occurs secondarily to a considerable number of other conditions. A wide range of headache types have been classified in detail by the International Headache Society. The most common among them are tension-type headache (TTH), migraine, cluster headache and chronic daily headache syndromes.[1]

The scale of the problem

Eleven percent of the world's adult population suffer from migraine.[2] Migraine was listed by the World Health Organization[1] in 2000 as the 19th highest cause of disability (12th in women). The burden of illness is high because, whilst it affects all ages, it is most disabling to those aged 35-45 years – a productive period of life. An estimate of the total cost of migraine in Europe is €27 billion per year.[3] Whilst this largely reflects the high indirect costs incurred in developed countries, sufficient evidence exists that migraine imposes similar levels of ill-health in all continents and in developing as well as developed countries.[2,3]

How severe is migraine?

Headache rarely signals serious underlying illness; its public-health importance lies in its causal association with the personal and societal burdens of pain, disability, damaged quality of life and financial cost. Headache is high among causes of consulting medical

practitioners. A survey of neurologists found that up to one-third of all their patients consulted because of headache – more than for any other complaint.[1]

Causes of migraine

Previously, migraine was thought to be caused by changes in blood vessels, although imaging techniques have now revealed that activation of a mechanism deep in the brain (possibly the dorsolateral pons)[4] causes release of pain-producing inflammatory substances around the nerves and blood vessels of the head. Why this happens periodically, and what brings the process to an end in spontaneous resolution of attacks, is uncertain.[1]

As a primary headache disorder, migraine almost certainly has a genetic basis. Commonly starting at puberty, migraine most affects those aged between 35 and 45 years but can trouble much younger people, including children. The higher rates in women everywhere (2-3 times those in men) are hormonally-driven.[1]

Predisposing or trigger factors are found in only a minority of people but are important, as they may help in managing migraine. In about 20% a dietary factor can be identified. Examples of factors are stress or relaxation after periods of stress; anxiety or depression; trauma to the head or neck; dietary factors, including cheese, chocolate, alcohol and citrus fruits; missed meals; sleep deprivation or excessive sleep; oral contraceptives and vasodilators which may precipitate or exacerbate the condition.[4]

Diagnosis

The International Headache Society produced a classification of migraine in 1998, revised and abbreviated in 2002 and 2004. This clarified diagnostic criteria and put the emphasis for diagnosis on good history taking. The classifications are as follows:

- Migraine without aura, formerly common migraine, occurs in around 75% of cases
- Migraine with aura, formerly classic migraine, occurs in around 20% of cases
- Childhood periodic syndromes that frequently progress to migraine-like cyclical vomiting and abdominal migraine
- Retinal migraine
- Complications of migraine
- Probable migraine.[4]

As there are no diagnostic tests, patients are often advised to keep a diary of their symptoms, which can help identify the type of migraine experienced.

Main features of the disease

In adults, migraine usually last from a matter of hours to 2-3 days, with attack frequency being anywhere between once a year and once a week (most commonly once a month).[1] Up to 50% of individuals experience a premonitory phase preceding a migraine, which lasts for hours or days. Features include depression, tiredness, difficulty concentrating, irritability, stiff neck, food cravings or a feeling that a migraine is imminent.[4] Migraines are classified in

different ways, and although there are a range of symptoms for each, they tend to be constant for the individual.

Migraine without aura is the most common type of migraine. Typically it is unilateral (one side of the head), pulsating, causes moderate to severe pain and is aggravated by routine physical activity. In addition there is usually at least one accompanying symptom of nausea, vomiting, photophobia (an intolerance of normal levels of light) or phonophobia (an intolerance of normal levels of sound).[1]

Migraine with aura - the aura usually involves either visual disturbance or sensory symptoms such as paraesthesia (pins and needles) and numbness. Sensory auras rarely occur alone and usually follow visual auras. The headache begins before the end of the aura or within an hour of the end, and has the same features as migraine without aura.[1,4]

Migraine in children - is fairly similar to adults, although abdominal symptoms are more prominent.[1] The headache is often bilateral (both sides of the head) or in the middle, and attacks may be shorter.[4]

Menstrual migraine – is a migraine without aura, occurring regularly within a day or two of the onset of menstruation and at no other time. It is probably due to falling oestrogen levels. Only 14% of women with migraine suffer from menstrual migraine but up to 60% suffer from menstrual-associated migraine.[4]

Treatments and therapies

Migraine attacks are treated using three different types of medication; analgesia (pain relievers), anti-emetics (anti-sickness medicines) and triptans.[5]

Analgesia: the European Federation of Neurological Societies (EFNS) recommend the use of non-steroidal anti-inflammatory drugs (NSAID) such as ibuprofen, tolfenamic acid, naproxen or diclofenac,[6] although other commonly used analgesics include paracetamol and aspirin.[5] Codeine, alone or in combination products, or other opioids (such as dihydrocodeine, morphine, and pethidine), should be avoided.[5]

Antiemetics: such as domperidone or metoclopramide should be given prior to an analgesic or a triptan. [6]

Triptans - also known as 5-hydroxytriptamine (5HT) agonists, are generally used when analgesia is ineffective. Examples include sumatriptan, zolmitriptan, naratriptan, rizatriptan, eletriptan, almotriptan, and frovatriptan. Triptans should be started at the onset of the headache, but not before (during the aura for example). When the first dose of a triptan is found to be ineffective, it is likely to remain ineffective (with the exception of zolmitriptan) and therefore patients are usually switched to an alternative triptan or preventative therapy.[5]

Preventative treatments are usually considered if attacks are very frequent or if available drug treatments are contraindicated (not suitable). Recommended preventative medicines

include beta-blockers (propranolol and metoprolol), flunarizine, valproic acid and topiramate.[6] Nonsteroidal anti-inflammatory drugs and hormonal treatment can be used to prevent menstrual migraine.[5]

Impact on the lives of those affected and carers

Repeated headache attacks, and often the constant fear of the next one, damage family life, social life and employment, such that social activity and work capacity are reduced in almost all migraine sufferers.[1] The long-term effort of coping with a chronic headache disorder may also predispose the individual to other illnesses. For example, depression is three times more common in people with migraine or severe headaches than in healthy individuals.[1]

Unmet needs

Headache has been and continues to be underestimated in scope and scale, and headache disorders remain under-recognized and under-treated throughout the world.[1]

There are many reasons for this, principally there is a lack of knowledge among health-care providers. There is also poor awareness in the general public, with headache disorders often being trivialized, even those directly affected often don't realize they have migraine or that they need proper medical care. Additionally, many governments, seeking to constrain health-care costs, do not acknowledge the substantial burden of headache on society.[1]

The global campaign ***Lifting the Burden***, was launched in 2004 and aims to reduce the burden of headache worldwide. It is a joint action between four partners, World Health Organization (WHO), World Headache Alliance (WHA), the International Headache Society (IHS) and European Headache Federation.[7]

Further information

- The International Headache Society http://www.i-h-s.org/
- World Headache Alliance http://www.w-h-a.org/
- Lifting the Burden. The Global Campaign Against Headache http://www.l-t-b.org/
- European Headache Federation http://www.ehf-org.org/Pages/default.aspx

References

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