REBOUND HEADACHES

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In the 1988 International Headache Society (IHS) classification drug-induced headache is defined as:
• headache appearing at least 15 days a month
• headache induced by the regular intake of analgesics, ergot alkaloids
• headache disappearing after withdrawal of substance.

The term drug-induced headache has now been changed to medication-overuse headache in the new IHS classification. In the new classification it is required that the headache should worsen or increase in frequency during symptomatic medication overuse.

Chronic headaches with medication overuse occurs in about 1% of the general population. This association is common until middle age and declines thereafter. It peaks at 40 - 49 years in women and at 50 - 59 years in men.

The association between analgesic overuse and headache is stronger in migraine than in non-migrainous headache sufferers. Tension-type headaches also have a very strong association with analgesic overuse. The concept that medication used to manage headache can become a cause of headache if overused has been difficult to appreciate.

Clinical features

According to most estimates, approximately 90% of the population suffer from headaches, most commonly tension-type headache. The pain is mild to moderate, non-throbbing, steady and aching, spreading to both sides of the head and lasting hours to days. The vast majority of the population self-medicate these headaches with over-the-counter products. Less than 20% of patients with headaches seek medical attention and usually only after over-the-counter medications have failed.

The chronic, daily headaches caused by analgesics are usually the result of the medication causing an increase in frequency of the headache. Often the headache becomes continuous for days and frequently for weeks. Any patient with a history of tension-type or migraine headache can transform into a chronic, daily headache sufferer if he/she overuses certain medications. Medications regarded as safe are in fact the most likely culprits. Among these are aspirin, sinuses relief medications, acetaminophen, sedatives for sleep, codeine and related narcotic preparations, and over-the-counter combination headache remedies.

While small amounts of these medications per week may be safe and effective for intermittent or periodic headaches, at some point the continued medication use leads to the development of a low-grade headache that will just not go away. Taking larger and more frequent doses of the offending immediate-relief medication is not recommended. This only exposes the patient to a higher level of the medication's toxicity and also perpetuates the situation, worsening it and sometimes making it continue indefinitely. The patients eventually 'live' on the medication for months on end because they continue to find short-term relief, even though the headache inevitably returns.

Often the headache occurs in the middle of the night while the patient is sleeping – the patient awakens with persistent headache because he/she has missed the next scheduled dose.

Causation: the role of drugs and the role of secondary headaches

There is no established threshold for the quantity, frequency or duration of medication required for the development of drug-induced rebound headache. Affected patients typically take headache-relieving medication daily or near daily, but the sustained use of these medications more than 3 days a week is probably sufficient to develop drug-induced rebound headache.

All symptomatic medication including tryptans has the potential to cause drug-induced rebound headaches. Only after a careful evaluation for secondary headaches should drug-induced rebound headaches be suspected in patients with medication overuse. The physician should remain alert to the signs of secondary headache in patients who self-medicate.

Treatment

The treatment is only effective after recognition of the problem, and recognition is half the battle won. This kind of patient should be referred to a clinician experienced in difficult headache problems.

Usually discontinuing the medication will lead to the development of more easily controlled headache headaches with the use of carefully administered headache-avoiding medications. Sometimes detoxification is required in patients taking large doses of sedative hypnotics, sedative combination headache pills or narcotics. These patients may need to be admitted to hospital to recover under supervision. Detoxification for the first several weeks is often plagued by increasing headache frequency which is a rebound phenomenon of sorts and therefore this should never be attempted by the patient without medical supervision. However, if the patient perseveres the headache will disappear and resume its previous intermittent nature. Preventive medication when prescribed then becomes more effective.

After withdrawal or detoxification has been completed, the symptomatic medication should never be used for more than 2 days a week. Non-steroidal anti-inflammatory drugs are frequently useful in this kind of patient and tryptans can be used for migraine flares. It is important to prevent these patients from using combination analgesics, caffeine-containing compounds and narcotics. Lifestyle management is a useful way of treating this type of patient. There is a role for anti-epileptic drugs, particularly valproic acid or sodium valproate, gabapentin and/or topiramate.

MORE ABOUT

CERVICAL HEADACHE – MANUAL PHYSIOTHERAPY CAN HELP

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Some physiotherapists have postgraduate qualifications in orthopaedic manual therapy, where they are specifically trained in manual techniques, evaluations and appropriate therapeutic exercise. This type of therapist, working in conjunction with the patient’s GP, a neurologist, an ENT specialist, maxillofacial surgeon, dietician, optometrist, homeopath, or clinical psychologist, can offer successful treatment and ongoing management of cervical headaches.

Therapy for headaches of cervical origin can relieve, pre-empt and often cure the headache. Physiotherapists work on the motion segments of atlanto-occipital joint C1/2 C2/3 specifically and have an
Effect on the C1 C2 and C3 spinal nerves, which supply the head, forehead and temples with branches to the temporomandibular joint.

Sensation from the face is from the trigeminal nerve, and manual therapists have an effect on the trigemino-cervical nucleus when working on the upper cervical spine. The therapy is aimed at the neuromuscular skeletal system. The therapy is aimed at the neuromuscular skeletal system. The therapist aims to find the primary cause and recognise and treat the secondary effects.

A detailed history is taken in which pre-disposing factors as well as pain behaviour are recorded. Symptoms of different causes of headache overlap – and this overlap may be missed if examination is superficial and relies too much on plain X-rays.

Physical examination of the neck should include a detailed assessment of the articular, muscular and neural structures. Note is taken of dysfunction as well as pathology.

- Range of movement and quality of movement is assessed.
- Vertebral artery is tested.
- Neurological examination is done.
- Muscle examination: muscles are felt for protective spasm, for strength, and for length.
- Passive movement of individual motion segments is assessed.

I recommend the Maitland type because it is precise, gentle, and requires skill and finesse. No harm can come to the patient in the hands of a skilled clinician.

The emphasis in cervical headaches is on the atlanto-occipital joint structures and first, second and third cervical motion segments. Remobilisation of these motion segments restores passive and accessory movement, increases blood flow and oxygen and stimulates the proprioceptive fibres, thereby blocking the pain.

First the joints are enabled to move through passive movement. Pain decreases and spasm is relieved. This is followed by various soft tissue techniques, including myofascial release, trigger point therapy, mainly to the strap muscles, trapezius, sternocleidomastoid and scalene muscles.

Electrotherapy is used to decrease muscle spasm, relieve pain and improve blood supply. Ultrasound, interferential, TENS and laser are also used as adjunctive therapy.

Exercises are important because they improve muscle strength. Initial exercises are gentle, small and mobilising, followed by a deep stabilising muscle programme, which is essential for relief. Subjecting the patient to a full-blown strengthening programme too early can exacerbate the condition.

The exercises need to be applied specifically, initially at least by a physiotherapist before using other disciplines such as Pilates or biokinetics.

There is a misconception that therapy can only be requested when the acute stage has settled with medication and rest. In skilled hands the acute stage is well managed and pain relief and improved quality of movement and healing is greatly enhanced within the first 3 weeks. There is no place for strong techniques in the neck and it makes no sense to cause pain in the name of relieving it.

All manual therapy should be applied gently and with finesse, and the treatment can be progressed to deeper techniques when the joint structures permit. Physiotherapists feel for muscle spasm, joint resistance, intra-articular joint resistance and ask about pain. A skilled therapist can feel fractions of a millimetre of movement (much like reading Braille). The training integrates the muscular, skeletal and neural systems.

There are three functional units of the spine that are important when looking at the patient as a whole:
- the C1/2/3 and the temporomandibular joint complex
- the cervicotoracic and shoulder complex
- the lumbar sacral, pelvis and hip complex.

Any pathology or dysfunction in any of these affect the others.

There are many causes of chronic headache, and the physiotherapist can help the most in the following:
- **Osteoarthritis of the cervical spine.** The most common motion segment to be affected is C2/3. However, lower cervical spondylosis muscle spasm contributes to tension-type headache. These motion segments are remobilised by the Maitland technique. An improvement in their range of movement decreases swelling, giving significant relief.
- **Whiplash and post-traumatic headache.** This especially affects the C2/3 motion segment, giving rise to significant headaches. Very gentle pain-relieving techniques (less than 1 mm of movement) are applied in a position of ease and can be followed by electrotherapy, ice and immobilisation.
- **Poor posture/tension headaches.** These are aggravated by poor postures and muscle weakness. Posture re-education and exercise therapy improves this rapidly. Stiff and painful joints in the upper cervical spine need to be remobilised first, followed by those in the lower cervical and thoracic spines. This is followed by soft-tissue techniques and corrective exercises.
- **Suboccipital neuralgia**—the release and unloading of the muscle insertions around the atlanto-occipital joint, nuchal line and upper cervical joints is of great value.
- **Cervical migraine.** The treatment of the cervical spine and thoracic spine have an effect on the autonomic nervous system, especially from T1 to T4 in the cervical spine, and working around the cervico-sympathetic ganglia will have an effect. This also ties up with vascular and cluster type headaches.
- **Dura mater.** The ventral rami of C1 and C2 and the sino-vertebral nerve can be the source of pain referring to the dura mater.
- **Sinus headaches**—ultrasound, dry needling, cranial mobilisation and sinus drainage. Correction of poking chin posture resulting from breathing through the mouth.
- **Temporomandibular joint**—mobilisations to TMJ and cervical spine, massage, ice, ultrasound.

References available on request.