

Post-traumatic headaches

A brief review for Keoghs

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Even following a minor head injury, brain function can be temporarily impaired as a result of concussion, which can lead to difficulties including headaches. Whereas most claimants are symptom free within a short period, some report suffering ongoing problems for months or even years ahead. For more severe brain injuries it is common to see claimants' symptoms being more pronounced, also impacting on their ability to continue working, quality of life and function in terms of daily activities. It is therefore necessary in these claims to consider and focus on the key medical causation aspects and potential treatment/rehabilitation options arising to enhance their prospects of achieving a good recovery and reducing the potential value of the claim.

In this article Dr Colin Mumford, Consultant Neurologist, analyses the topic in detail, including the different types of post traumatic headaches faced by Insurers and the best approaches to their management by way of early recognition.

Headaches following trauma are common. They fall, in general, into three main types. The first type is relatively rare, and is likely to have been dealt with medically long before a case reaches the stage of litigation, but these will very probably give rise to a later insurance claim or other form of legal action. The other types of post-traumatic headache are seen more commonly.

The first group comprises those headaches due to release of blood into, or around, the brain as a result of the index injury. These are frequently life threatening. There is a major artery – the middle meningeal artery – just inside the skull at the side of the head. With a heavy fall onto the parietal area of the skull, this artery may rupture, and start to leak. The accumulation of blood gives rise to a collection of blood outside the fibrous sheaths that encase the brain: a so-called extra-dural haematoma. There may be little in the way of headache at first, with the victim initially insisting that they are fine, but with the passage of time, often just minutes or an hour, the pool of arterial blood under high-pressure increases in size, at which point the victim will certainly complain of a severe headache. The pressure on the brain may be catastrophic as the midline structures of the brain are progressively compressed, and death may result. Emergency

neurosurgical removal of the blood is usually essential. This is the explanation for those individuals who “talk then die” after an apparent minor head injury, and has been seen in recent years in one or two tragedies when high profile individuals have died following seemingly innocuous falls on ski slopes. Ski (and bicycle) helmet use should strongly be encouraged to reduce the risk of such catastrophes.

A different type of bleeding may be harder to spot. The associated post-traumatic headache may be milder, and may only emerge days or weeks after the relevant head injury, which – especially in the elderly – may have been only mild in nature. These headaches result from a slow accumulation of blood over the surface of the brain, within the thick fibrous sheaths that encase it, and are due to the development of a so-called subdural haematoma. The insidious onset of these blood clots mean that the headache may be subtle or delayed in onset, and the victim may not link its presence to a recent head injury. On occasion there is no headache at all, merely a change in behaviour, disorientation, or uncharacteristic confusion and forgetfulness in the victim. In general, but not always, neurosurgical removal of the subdural blood is required.

Insurers and medicolegal lawyers will also be familiar with the small pin-point areas of bleeding that may be sustained within the substance of the brain as the result of a head injury. These are referred to as contusions, and whilst there may be some later clinical impact of these, especially if they are numerous following head trauma, these do not usually give rise to any headache. Neurosurgical intervention for such contusions is rarely indicated.

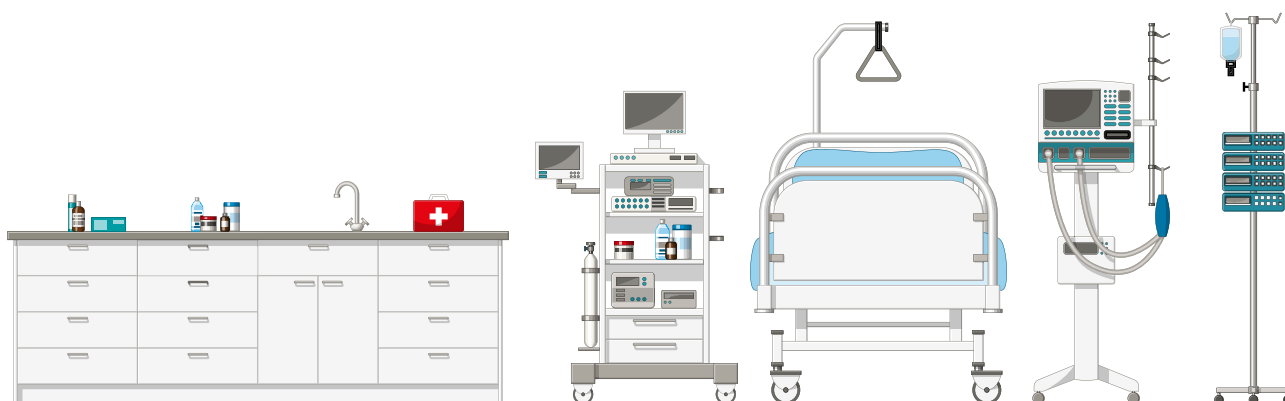
Most post-traumatic headaches are less dramatic than those described above. It is a matter of common sense that an individual who sustains a head injury - even minor - may have some local pain together with bruising at the site of injury. There may be only mild discomfort, which resolves in a matter of hours, but other people will experience a longer-lasting, rather ill-defined generalised headache which may persist for a few days, or perhaps a few weeks. The pain tends to be constant, all-over, mild-to-moderate in intensity, and simply slowly resolves with time. Clinical neurological examination, and any brain imaging, is invariably normal. The terminology used to describe these headaches varies between medical professionals, but the simple label of "post-traumatic headache" is probably optimal. Complete resolution of the headache can generally be expected, with no real risk of recurrence.

More complex is the issue of post-traumatic migraine. Solicitors and insurers will be familiar with claims for a new-onset of recurrent migranous headaches in individuals who have sustained what is often just a trivial head injury. Many of these cases probably are valid, in that post-traumatic migraine does appear to emerge in some people who have never previously had migraine, following a relatively mild bang on the head. Caution is needed however, since careful review of the clinical history frequently reveals that the claimant does, in fact, have a past history of migraine, sometimes unrecognised by the individual themselves. Often - when a complete medical history is elicited - such head injury victims will say that they used to experience "normal headaches", but deny that these were migraine. However, on listening to their presentation of the characteristics of these "normal" headaches, very frequently it becomes clear that their "normal" episodes were one-sided, throbbing in nature, associated with an element of nausea, and were immediately recognised as soon as they started, i.e. they were familiar to the person concerned. Such stereotyped headaches, in reality, probably do represent a mild form of migraine, so the legal consideration changes from a case in which there is the development of migraine as an entirely new phenomenon, to a more understandable case of exacerbation of a previously-established migraine condition, which would be there in any event.

There is nothing unusual about the amenability of post-traumatic migraine to treatment. These headaches should respond well to the correct treatment strategy, as would be the case for other forms of migraine not due to head injury. Many GPs, and certainly all regional headache clinics, should be able to achieve a meaningful reduction in the frequency and severity of post-traumatic migraine, and in many cases, but not in all, complete abolition may be possible. Treatment of migraine of any origin hinges on three main considerations. The first is establishing the fact that the headache really is migraine, and exploring whether any lifestyle or dietary features are aggravating the situation. Irregular sleeping patterns, excess red wine, blue cheese, strong dark chocolate and freshly-squeezed citrus fruit drinks may all exacerbate and/or provoke such headaches. Simple dietary exclusions may be beneficial. Thereafter, medication is needed, and the drugs fall into two groups, first those treatments which are used in the acute situation, i.e. taken to kill off the headache when it arises; and secondly, those agents which are taken on a regular basis which act as migraine preventatives.

The acute treatments include simple pain-killers, many of which are overlooked by headache sufferers on the assumption that they will be ineffective. The reason for this neglect of potentially good products relates to the fact that the upper part of the gastrointestinal tract goes into a "shutdown" as part of the migraine attack. Hence medication is neither absorbed from the stomach, nor is it effective if it is taken in inadequate dose. Most British aspirin tablets are 300mg in size, and one tablet will usually do nothing for the migraine sufferer. Instead, a much higher dose such as 900mg will, in general, work well, especially if given in soluble form, and ideally also taken with fizzy water which appears to enhance its absorption. The non-steroidal drugs such as ibuprofen may also be effective, but again, one standard tablet (200 mg) is seldom adequate, whereas a higher dose (for example 400 mg) may be highly effective. Some care is needed with these agents since they may cause gastric irritation and provoke ulcers in the upper gastrointestinal tract, so liaison with the patient's GP is usually needed. In contrast, other analgesics such as paracetamol and codeine are rather less good as treatments for migraine, and may indeed be counter-productive, giving rise to a separate problem as described below.

When simple analgesics fail, the newer "triptan" family of drugs may be highly effective, sometimes abolishing a migraine headache completely within just ten to fifteen minutes after administration. There are numerous triptan products now available and the range includes drugs such as sumatriptan, rizatriptan, zolmitriptan and several others.



Drugs for the prevention of migraine fall into several groups. In years gone by the mainstay of migraine prevention was with the beta-blocking drugs such as propranolol. These remain effective, though have some side effects, including exacerbation of asthma and other chest diseases, making them unsuitable for everyone. Another useful group is the tricyclic antidepressants, with agents such as amitriptyline and nortriptyline proving beneficial as headache preventatives for many migraine sufferers. Side-effects such as drowsiness and dryness of the mouth may however preclude their use. In recent years there has been considerable interest in the benefit of several drugs more commonly thought of as anti-epileptic medications as useful migraine preventatives. These may be effective where other preventatives have failed, but their use will, in general, require specialist input.

Finally, it is worth solicitors and insurers being aware of one much under-appreciated cause of headache, which may be a key driver of a prolonged post-traumatic headache syndrome. This is the phenomenon called a “medication overuse headache”, sometimes more bluntly described as an “analgesic-driven headache”. This condition is seen in individuals with headaches who get into the habit of taking large quantities of over-the-counter analgesic medication.

The cause is not fully understood, but it is assumed that this misguided excessive intake of tablets - which may erroneously be perceived as harmless by the headache sufferer - appears to reset levels of neurotransmitters in the brain, so perpetuating the headache. Patients with this condition often deny using “excess drugs” when asked, but in response to the question “how long does a box of paracetamol last you?” may give alarming responses such as “I get through two boxes every week” or words to that effect. Paracetamol and codeine-containing drugs seem to be especially problematic in this regard. Recognition of this type of headache, which is surprisingly common in day to day medical practice, is clearly important, since it is a prime example of a condition for which treatment revolves around removing the excessive medication, rather than prescribing additional drugs.

Recognition and management of post-traumatic headaches is generally straightforward. It would be wrong to assume that such headaches will inevitably become a long-term issue for the accident victim. In the majority of cases, appropriate specialist input will provide a clear diagnostic formulation, and will permit a robust strategy for treatment to be established. This, in turn, should either abolish, or usefully reduce, both the frequency and intensity of any such headaches.

Keoghs comment

It is sometimes wrongly assumed that post-accident headaches will inevitably become a long-term issue for the claimant. However, different treatment strategies exist that should be considered with a view to resolving or significantly reducing their frequency and intensity, as well as improving their condition and prognosis. It is firstly important to obtain and carefully analyse an individual's full medical records, to identify the nature and pattern of their reported symptoms as well as their medical and treatment history. Specialist input from a Consultant Neurologist, may well often help provide a clear and correct diagnostic formulation and identify a treatment strategy, including (when applicable) considering a case manager's rehab recommendations, which should assist, when implemented, in improving their recovery and outcome.

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