UPDATE Clinical
Module 1739

This module covers:

- Medication overuse headache (MOH), its prevalence and cost to society
- Which drugs can cause MOH and how to diagnose it
- Management of symptoms and drug withdrawal
- How pharmacists can help patients prevent MOH in the future

February »
Headache month

Tension-type headaches	Feb 7*
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**Online-only for Update and Update Plus subscribers*

Managing medication overuse headaches

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Sandra appears at the counter again, and asks your counter assistant for sumatriptan. You have noticed that she has been buying these surprisingly regularly and decide to question her about her usage. Sandra quickly becomes angry. "They are not addictive," she insists. "Why can't I use them whenever I need to?"

Several days later, she returns and tearfully apologises for being so angry. She explains that her migraines seem to have been getting worse lately and she now has a constant headache that just will not go. She is scared that if she does not take the sumatriptan, the headache will get worse. She asks you if there are any stronger drugs she can use to get rid of the headache once and for all.

Sandra's case is typical of medication overuse headache (MOH). It is a condition that pharmacists probably come into contact with on a daily basis but it remains a little-known problem and can be difficult for patients and healthcare professionals alike to recognise.

Estimates vary, but it is thought to affect about 2 per cent of adults and is responsible for 90 per cent of chronic daily headaches. It is five times more common in women than men and most prevalent in those aged 40 to 50 years.

The ready availability of a variety of over-the-counter (OTC) acute painkillers means it can be suprisingly easy to fall into a vicious cycle of worsening headaches and increasing medication use. Because many sufferers will be regular visitors to the pharmacy, staff can play an important part in preventing, recognising and managing the problem.

MOH can greatly affect a sufferer's quality of life as well as having wider societal implications. Its cost to the UK is not currently known but is thought to be higher than that of migraine. One recent estimate suggested a total national cost of €5-10 billion in Italy, Spain and France. Ninety per cent of headache disorder costs are due to work absences and loss of productivity. It therefore seems likely that, given how common it is, MOH may be very costly overall.

Medication overuse headache diagnosis criteria

All of the following must be present:

- Headache on 15 or more days per month
- Regular overuse for more than three months of one or more acute/symptomatic treatment drugs: ergotamine, triptans, opioids or combined analgesic medications – typically simple analgesics plus opioids or caffeine – on 10 or more days per month or simple analgesics alone or any combination of ergotamine, triptans and analgesic opioids on 15 or more days per month
- Development or marked worsening of headache during medication overuse

Source: Headache - Medication overuse, Nice Clinical Knowledge Summaries, 2012

Symptoms and diagnosis

MOH only develops in those who suffer from a primary headache. It occurs most commonly in people who suffer from migraine or tension-type headaches (TTH) and less frequently in sufferers of cluster headache. Patients who use acute painkillers regularly for their primary headaches can start to experience a worsening in their symptoms, eventually resulting in a new, chronic type of headache superimposed on their original condition.

The type of headache that develops varies, depending on the initial headache condition. Those with migraines tend to experience a unilateral, pulsing headache, often with autonomic disturbances. Those with TTH are more likely to feel a constant, diffuse headache, which is often described as oppressive or pressing. Patients with cluster headaches develop a migraine-like daily headache. All types are usually at their worst first thing in the morning or after exercise.

MOH should be suspected in any patient who suffers from a primary headache and who has developed worsening or different headaches for more than 15 days per month. See *Medication overuse headache diagnosis criteria*, left.

Diagnosis is based on careful history-taking, with investigations being rarely required.

The current evidence is too limited to firmly define any risk factors, but seems to suggest some links to regular tranquilliser use, chronic

musculoskeletal and gastrointestinal complaints, smoking, physical inactivity, depression and anxiety. Low socioeconomic status and a family history of MOH or other substance abuse may also be linked to increased risk.

Causes of MOH

MOH can develop in response to overuse of any acute symptomatic headache treatment – even those medicines not traditionally thought of as addictive. Patients may be unlikely to link such seemingly innocuous medicines to their worsening symptoms. The mechanism by which MOH occurs is not completely known and varies depending on the type of medicines involved. In some cases, a combination of factors may occur.

For example, overuse of paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs) and weak opioids is thought to lead to a change in neural pain pathways. Painkillers including drugs with addictive properties, such as caffeine or codeine, however, may cause the headaches through dependence. Triptans and ergotamine may cause symptoms through a down-regulation of serotonin receptors.

MOH can develop regardless of how much medicine is used – it is far more dependent on frequency of use. Even patients taking less than the recommended dose on most days can be at risk. This is especially true for the triptans, which seem to require the lowest number of doses to cause MOH compared to other analgesics. Ten days of their use per month can provoke MOH compared to the 15 days a month needed for other analgesics – although the exact amounts and frequency of use needed are not clear and likely to be variable.

The cycle that patients can fall into can quickly start to mirror that of dependence. Patients may start taking medicines in anticipation of pain, as well as taking higher doses as tolerance develops.

Management of MOH

There is evidence that the majority of patients suffering from MOH have little knowledge of what it is and what causes it. However, patients who are motivated and well informed about MOH fare better during treatment. Recognition is therefore arguably the most important part of management, followed by good communication throughout the treatment process.

Drug withdrawal is the only effective treatment for MOH. While several strategies for withdrawal have been proposed, Nice recommends that all painkillers should be stopped abruptly, rather than gradually. This may seem counterintuitive and frightening to patients, so careful discussion and reassurance is important.

Patients should be forewarned that their symptoms are likely to get worse before they get better, but that they should feel a real benefit in the long term. For the majority of people, withdrawal can be effectively managed in primary care. As well as a worsening headache, patients may experience other withdrawal symptoms such as nausea, vomiting, arterial hypotension, tachycardia, sleep disturbances, anxiety and restlessness. These effects tend to last between two and 10 days.

Severity can vary. Withdrawal headache and associated symptoms seem to settle sooner in those who have been overusing triptans compared to other analgesics. An inpatient referral should only be considered for those with significant comorbidities (see *Significant comorbidities requiring inpatient referral*, above), those who have failed repeated withdrawal attempts and those overusing strong opioids.

The patient should maintain regular contact with their GP or other prescriber throughout the withdrawal period. Patients should also be advised against continuing to manage the condition on their own, as this may lead to further drug overuse.

Pharmacists can be a useful point of contact for information and advice. As well as considering the headache, pharmacists should explore any potential problems caused by the patient's frequent medicine use. If patients have been exceeding the recommended dose of paracetamol, they may be at risk of serious liver toxicity. Pharmacists can speak to the National Poisons Information Service on 0844 892 0111 for guidance on managing patients.

Patients who have been regularly using NSAIDs, particularly at high doses, may be at risk of gastric ulcers, while those who have been overusing opioids may have problems with constipation.

The success of the withdrawal should be reviewed after four to eight weeks, by which time the headaches should have reverted back to their primary pattern. Where there has been no improvement, an alternative diagnosis should be pursued.

There is no robust evidence supporting an ideal time period for withdrawal. Some international guidelines suggest a minimum of two months, but this may prove impractical. Nice guidelines adopt a more pragmatic approach of withdrawal for at least one month. Both the type of medicine being overused, and the type of primary headache, may influence the length of the process.

Significant comorbidities requiring inpatient referral

- Psychological problems, especially if at increased risk of suicide
- Physical problems such as angina or diabetes, especially if elderly or frail
- History of dependence behaviour
- Pregnancy
- Painful conditions requiring continued symptomatic treatment

Sources: Headache - Medication overuse, Nice Clinical Knowledge Summaries, 2012; Management of medication overuse headache, Drug and Therapeutics Bulletin, 2010

Treating withdrawal

In most cases, symptoms do not require pharmacological treatment. Antiemetics may be considered in patients who are struggling with sickness.

The use of prophylactic treatment for the primary headache disorder during the withdrawal phase is controversial and the efficacy remains unknown. Studies are small, methodologically flawed and have produced conflicting results. Prophylaxis should not be routinely used, but where it is considered useful, usual migraine prophylaxis should be used for those with primary migraine headaches, while a course of steroids should be considered for those with TTH and cluster headaches.

In patients whose MOH is not caused by NSAIDs, naproxen may be considered for three to four weeks. It should be taken on a regular basis, regardless of symptoms, in order to help break the habit of using painkillers in response to pain. It should be stopped abruptly once withdrawal is complete.

There is little evidence on the effectiveness of talking therapies on MOH outcomes but cognitive behavioural therapy (CBT) and/or counselling may be useful in those who demonstrate symptoms of psychological dependence, as well as those suffering from anxiety or depression.

Patients who have previously suffered from MOH may be understandably fearful of relapse following withdrawal. Studies looking at this are currently limited but it would appear that about 20 to 40 per cent of patients relapse within the first year following withdrawal. This percentage drops off dramatically after one year.

Preventing MOH

Pharmacists can identify patients at risk of MOH by looking out for those who are frequently buying OTC painkillers, particularly if they are topping up supplies of prescription medications. Combination analgesics containing addictive ingredients may be particularly problematic.

MURs may be a perfect time to pre-emptively discuss the risk of MOH in those using relevant medicines. Pharmacists can keep an eye out for patients who are trying to self-treat worsening symptoms. Explain to them that medication use may be the cause and signpost to their GP. A headache diary can help patients recognise when they are starting to slip into a vicious cycle.

Any discussions should be carried out sensitively and non-judgementally, because some patients may become defensive or think they are being accused of being a drug addict.

Management of future headaches

Patients may be concerned about how to deal with headaches following withdrawal. Pharmacists can provide reassurance and guidance to help them treat their headaches without again falling victim to MOH.

Patients should be able to take two or three doses of medicines over a day or two but should not take painkillers for more than two days in any given week. This may mean that they have to put up with some headaches rather than risk causing worsening symptoms. Appropriate prophylactic treatment may be helpful. Patients should be advised to avoid products containing addictive components where possible.

Pharmacists can also provide lifestyle advice that may help prevent or reduce the frequency of headaches. Eating a healthy diet and avoiding low blood sugar levels, keeping alcohol intake to within recommended limits, having a regular sleep pattern and drinking plenty of water may help to avoid triggering primary headaches. Patients should be advised to consider stopping smoking.

The Migraine Trust provides a useful patient-friendly factsheet on MOH. Patient.co.uk and NHS Choices are also useful websites for reliable advice and information.

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References

- Drug and Therapeutics Bulletin. Management of medication overuse headache: Clinical Review. BMJ 2010; 340: c1305
- Headache - Medication overuse. Nice Clinical Knowledge Summaries 2012. http://cks.nice.org.uk/headache-medication-overuse
- Kristofferson, E and Lunqvist, C. Medication-overuse headache: a review. Journal of pain Research 2014; 7: 367-368
- Patient.co.uk Medication Induced Headache 2015. www.patient.co.uk/health/medication-induced-medication-overuse-headache
- Nice Guidelines CG150 Headaches: Diagnosis and Management of headaches in young people and adults 2012. www.nice.org.uk/guidance/CG150

5 minute test

■ Sign up to take the 5 Minute Test and get your answers marked online: chemistanddruggist.co.uk/update

Take the 5 Minute Test

1. MOH is most common in people aged between 50 and 60 years.
True/false?

2. MOH occurs most commonly in people who suffer from migraine or tension-type headache.
True/false?

3. Overuse of triptans or opiates can result in MOH more quickly than other analgesics.
True/false?

4. Drug withdrawal is the only effective treatment for MOH.
True/false?

5. Nice recommends that painkillers should be gradually reduced in MOH drug withdrawal.
True/false?

6. Patients withdrawing from analgesics may experience worsening headache, nausea, sleep disturbances, anxiety and restlessness.
True/false?

7. Withdrawal headache and associated symptoms seem to settle sooner in those who have been overusing NSAIDs compared to other analgesics.
True/false?

8. About 50 per cent of patients relapse within the first year following analgesics withdrawal.
True/false?

9. Prophylactic treatment for the primary headache disorder during the withdrawal phase is usually recommended.
True/false?

10. Following withdrawal, patients should not take painkillers for more than two days in any given week.
True or false?

Tips for your CPD entry on MOH

Reflect **What are the criteria for diagnosing medication overuse headache (MOH)? What are the symptoms of MOH? How is it managed?**

Plan **This article describes MOH and includes information about symptoms, diagnosis and causes. Management, the use of prophylactic treatment and the role of the pharmacist in providing advice is also discussed.**

Act **Read the Update article and the suggested reading (below), then take the 5 Minute Test (above). Update and Update Plus subscribers can then access answers and a pre-filled CPD logsheet at chemistanddruggist.co.uk/mycpd.**

Make sure your counter staff are aware of MOH and know when to refer

Review the analgesic medications stocked in your pharmacy with your counter staff and make sure they are aware of the correct doses

Read more about MOH at Patient.co.uk
tinyurl.com/moh111

Think about how you would approach a patient you suspect may be overusing analgesics

Evaluate
Are you now confident in your knowledge of MOH? Could you identify at risk patients and give advice about the management of MOH?

EXPERT Q&A

Want to know more? Our headaches expert is on hand to answer any further questions on this month's topic. Email your queries to: **asktheexpert@updateplus.co.uk**