Headache prevention in a patient with hypertension

Commentary by **RICHARD STARK** MB BS, FRACP, MACLM

How can this patient with daily headaches, hypertension and a history of migraines be helped?

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Case scenario

A 62-year-old woman has suffered from headaches all her life. When she was younger, she had experienced attacks of classic weekend migraines, with aura, nausea and photophobia, but these lasted only a couple of days. Over the years the character of the headaches changed to become a much more frequent global ache, which proved difficult to control. She was helped at last when she started taking the monoamine oxidase inhibitor (MAOI) tranylcypromine (Parnate), and she had very few headaches for the next 25 years. Because of increasing concern about her unstable hypertension and also her dislike of the dietary restrictions advised while on this drug (avoiding foods with high tyramine content and alcohol), tranylcypromine was ceased 12 months ago. She has not had a headache-free day since, despite extensive medication trials and the use of several different antidepressants. Her blood pressure is now well controlled (without calcium channel blockers). She states that her headaches sometimes clear in the evening and she has noticed that they are definitely better when she is sleep deprived.

What mechanism could be at work here? How can this patient be helped?

Commentary

Diagnostic issues

The diagnosis in this patient needs consideration. There was an initial history of intermittent migraines; the pattern then changed to daily headache. This is characteristic of 'transformed migraine'. While the transformation may occur spontaneously, in Australia the most common cause, in my experience, is overuse of medications for treating headache symptomatically; the usual culprits are codeine-based compound analgesics but ergotamines and triptans can have the same effect.

In this patient the pattern of daily headache was broken with the use of tranylcypromine. There is some trial-based evidence and strong anecdotal evidence for the efficacy of MAOIs in migraine prevention, at least in some patients. It is possible that in this case a combination of migraine prophylactic and antidepressant effects reduced the requirement for regular analgesia and broke the cycle of transformed migraine–medication overuse headache. The recurrence of daily headache now is disappointing.

The relief with sleep deprivation is a little unusual. However, there is a complex and variable interaction between headache and sleep. Some individuals with migraine may, at different times, have attacks provoked by sleep deprivation or excessive sleep (sleeping in). Indeed, sleep often relieves a migraine attack. Some syndromes, such as cluster headache and hypnic headache, include headaches typically provoked by sleep; however, these are not diagnostic considerations in this patient.

As this woman has newly emerging daily headache at age 62 years, it is important to exclude underlying pathology. Assuming the examination is normal, I would request at least measurement of ESR and C-reactive protein (CRP), to exclude temporal arteritis, and imaging of the brain. Depending on the pattern of headache, imaging of sinuses or neck, or other tests may be required.

Medications

Symptomatic treatments

My approach with this patient would be to obtain a history of what medication has been used, and especially what symptomatic treatment is currently in use. It is helpful to record how much analgesic or other symptomatic treatments (and especially how many milligrams of codeine) are being used. If codeine, triptans or ergotamines were being overused, the first priority would be to

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withdraw them. This might involve strong willpower on the part of the patient on an outpatient basis, or perhaps admission to hospital so that breakthrough headaches could be minimised with intravenous agents such as dihydroergotamine (Dihydergot) or, my preferred option, lignocaine (Xylocard).

Migraine prophylaxis

As the original headaches were migrainous (albeit more than 25 years ago), it is reasonable to explore migraine prophylaxis. This would mean listing all the agents tried so far (including doses and why they were thought to be unhelpful) and then looking for options not yet tried at all or not tried in adequate doses.

Fortunately, many of the migraine preventives now in use tend to lower blood pressure. These include propranolol (Deralin, Inderal) and other β-blockers, calcium channel blockers such as verapamil (Anpec, Cordilox, Isoptin, Veracaps) and flunarizine (not routinely available in Australia but sometimes imported through the Special Access Scheme), and also candesartan (Atacand) and clonidine (Catapres). It is not rare to find patients who respond dramatically to one of these but not to others, so a period of trialling different agents may be required. The evidence supporting the use of these agents varies from well designed trials (mainly for the modern agents such as candesartan) to poorly designed trials or anecdotal reports (such as for clonidine and verapamil).

Other modern prophylactic agents to consider include topiramate (Topamax), for which there is good evidence supporting use, and botulinum toxin (Botox, Dysport), for which the evidence supporting use is only of moderate quality but there is increasing anecdotal experience of good results in some very intransigent cases. I would have a low threshold for offering a trial of botulinum toxin in this case.

If nothing else worked, resumption of an MAOI might be worth trying, with careful control of blood pressure and the usual dietary precautions, but I would certainly pursue all other options first.

Conclusion

In summary, my suggested approach (in order) would be:

- take a detailed history of the headache pattern and drug use
- consider unusual causes of headache and investigate appropriately
- exclude or treat medication overuse headache
- work through some migraine prophylactic agents by trial and error
- offer a trial of botulinum toxin.
- resume an MAOI if all else fails. MT

DECLARATION OF INTEREST: Professor Stark has been a member of a committee advising Allergan on the use of botulinum toxin in headache.