PEER REVIEWED

Chronic daily headache

How to assess and manage

DARSHAN GHIA MB BS(Hons), MD, DNB, FRACP
JACQUI SAW MB BS(Hons)

The two most common manifestations of chronic daily headache in general practice are chronic tension-type headache and chronic migraine. Secondary headache disorders and medication overuse should be excluded before giving lifestyle advice and planning prophylaxis and other treatment.

Headache remains one of the most common presentations to medical practitioners and the management of chronic presentations is difficult.[1-4] About 40% of patients seen in headache clinics have chronic daily headache (CDH), and these patients not only present classification and diagnostic dilemmas but also are particularly prone to medication overuse and morbidity.[1]

PAIN MANAGEMENT TODAY 2015; 2(1): 9-14

Dr Ghia is Clinical Senior Lecturer at the School of Medicine and Pharmacology, The University of Western Australia; Consultant Neurologist and Head of the Stroke Unit at the Royal Perth Hospital; Visiting Neurologist at St John of God Subiaco Hospital; and in private practice at Mosman Park and Karrinyup, Perth. Dr Saw is a Neurology Advanced Trainee and Senior Registrar at the Royal Perth Hospital, Perth, WA.

CDH is a collective term encompassing the conditions chronic migraine, chronic tension-type headache, new daily persistent headache and hemicrania continua.[1-4] It is possible for a patient to have more than one condition. Although medication-overuse headache has been considered a fifth type of CDH, this diagnosis should be given separately when it is present.[5] A precise classification system for CDH continues to elude us.

In general practice, chronic tension-type headache is the most common manifestation of CDH (55%), followed by chronic migraine (33%).[6] These are primary headache disorders, and GPs should be alert for signs or symptoms suggestive of secondary causes of headache (Box 1).[7] Examples of secondary headache disorders that can mimic CDH include inflammatory conditions (giant cell arteritis, Behçet's disease and sarcoidosis), chronic central nervous system infections (e.g. tuberculosis), brain tumours, cerebral venous sinus thrombosis, intracranial hypotension and hypertension, systemic hypertension, post-traumatic headache, obstructive sleep apnoea, depression and other psychiatric causes, intracranial aneurysm, sinus headache and substance abuse headaches.[6]

Key points

- **Chronic daily headache is a collective term referring to several headache types including chronic migraine, chronic tension-type headache, new daily persistent headache and hemicrania continua.**
- **When medication overuse is present, a separate diagnosis of medication-overuse headache should be considered.**
- **In a large proportion of patients with chronic daily headache, the first management step after secondary causes of headache have been excluded is withdrawal of acute medication.**
- **Lifestyle-related measures are critical in overall management and an interdisciplinary approach, managing neuropsychiatric disorders and other comorbid conditions, is essential.**
- **Effective prophylactic pharmacological treatment reduces the need for acute medication use.**

1. Features suggestive of a secondary cause of headache[7]

- Sudden-onset headache (thunderclap) – worse than previous headache, character change
- Pain exacerbated by coughing, sneezing or postural changes
- Pain associated with eye movement or blurred vision
- New focal neurological signs
- Systemic symptoms (neck stiffness, rash, fever, malaise, altered conscious state)
- Change in cognition (confused, drowsy)
- Headache that changes drastically (in nature, quality or site)
- Headache that fails to respond to appropriate therapy

The above signs and symptoms should be investigated further with contrast-enhanced imaging (CT scan, MRI or magnetic resonance angiography). In some cases more invasive investigations such as lumbar puncture are required. These patients are best referred to specialists.

The key to managing CDH is to exclude secondary headache disorders, obtain a detailed medication history and make a diagnosis of the primary headache type involved before giving lifestyle advice and planning prophylaxis and other treatment. The two most common manifestations of CDH are the focus of this article, namely chronic migraine and chronic tension-type headache.

Chronic migraine

Chronic migraine affects about 2% of the world's population. Through a process known as 'migraine transformation', each year about 3% of patients with migraine of an episodic pattern (fewer than 15 headache days a month) transition to a chronic migraine pattern (15 or more headache days a month).[8,9] Chronic migraine may revert to episodic migraine over time in about 25% of patients.[10]

Diagnostic criteria for chronic migraine are listed in Box 2. If the diagnosis is considered uncertain, the first management step is withdrawal of acute medications (such as simple analgesics, anti-nausea/vomiting medications, triptans) as a significant proportion of patients who present with chronic migraine will revert to episodic migraine on withdrawal of these medications. A proportion of patients, however, have both medication-overuse headache and chronic migraine, and hence both diagnoses should be attributed if necessary because they should be treated separately.[4,11]

Once the diagnosis has been made, management is based on a combination of evidence-based medicine and clinical experience. Planning of regular sleep schedules, regular meals, avoidance of a high intake of simple-carbohydrate foods, adequate hydration, restriction and consistency of caffeine intake, regular aerobic exercise and biofeedback or meditation are critical to a patient's overall management. The importance of an interdisciplinary approach, including limiting analgesic medication, initiating nonpharmacological treatment and managing neuropsychiatric disorders (depression and anxiety) and other comorbid conditions (obesity, snoring, sleep disorders), has been highlighted.[11]

Effective prophylactic pharmacological treatment reduces the need for acute medication use; however, only one-third of patients with chronic migraine are using preventive drugs.[12] It is expected that up to 50% of patients treated with one of these medications will have at least a 50% reduction in the frequency of headaches after three months of treatment (if given adequate doses).[13] Prophylactic pharmacological options for chronic migraine are discussed later in the article, along with supplementary and complementary medications and nonpharmacological treatment.

Chronic tension-type headache

Chronic tension-type headache can cause high morbidity and disability. The exact cause of this condition is unknown but may be related to peripheral pain mechanisms.[6] This type of headache evolves over time from frequent episodic tension-type headache.

Increased pericranial tenderness on manual palpation is the most consistent abnormality found in patients with chronic tension-type headache.[7] The headache is described as bilateral, pressing or tightening in quality and of mild to moderate intensity, lasting hours to days or unremitting. The pain does not worsen with physical activity, but it may be associated with mild nausea, photophobia or phonophobia.

Differentiating chronic tension-type headache from migraine is based on careful history taking. Triggers can be similar and lifestyle advice is largely the same for both conditions. The diagnostic criteria are stricter in an attempt to be more specific; these are listed in Box 3.[5] Prophylactic and other management therapeutic options for chronic tension-type headache are discussed below.

2. Chronic migraine diagnostic criteria[5]

According to *The International Classification of Headache Disorders* (3rd edition), a diagnosis of chronic migraine (ICHD-3 code 1.3) can be made if the following criteria are fulfilled.[5]

A. Headache (tension-type-like and/or migraine-like) on 15 or more days per month for more than three months AND fulfilling criteria B and C

B. Occurring in a patient who has had at least five attacks fulfilling: criteria 1 to 3 (i.e. criteria B to D for 1.1 Migraine without aura)

1. Headache attacks lasting 4 to 72 hours (untreated or unsuccessfully treated)
2. Headache has at least two of:
   - i unilateral location
   - ii pulsating quality
   - iii moderate or severe pain intensity
   - iv aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)
3. During headache at least one of the following is present:
   - i nausea and/or vomiting
   - ii photophobia and phonophobia

and/or criteria 4 and 5 (i.e. criteria B and C for 1.2 Migraine with aura)

4. One or more of the following fully reversible aura symptoms is present:
   - i visual
   - ii sensory
   - iii speech and/or language
   - iv motor
   - v brainstem
   - vi retinal
5. At least two of:
   - i at least one aura symptom spreads gradually over 5 minutes or longer, and/or two or more symptoms occur in succession
   - ii each individual aura symptom lasts 5 to 60 minutes
   - iii at least one aura symptom is unilateral
   - iv the aura is accompanied, or followed within 60 minutes, by headache

C. On eight days or more per month for more than three months, fulfilling any of:

criteria 1 and 2 (i.e. criteria C and D for 1.1 Migraine without aura)

1. Headache has at least two of:
   - i unilateral location
   - ii pulsating quality
   - iii moderate or severe pain intensity
   - iv aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)
2. During headache at least one of the following is present:
   - i nausea and/or vomiting
   - ii photophobia and phonophobia

criteria 3 and 4 (i.e. criteria B and C for 1.2 Migraine with aura)

3. One or more of the following fully reversible aura symptoms is present:
   - i visual
   - ii sensory
   - iii speech and/or language
   - iv motor
   - v brainstem
   - vi retinal
4. At least two of:
   - i at least one aura symptom spreads gradually over 5 minutes or longer, and/or two or more symptoms occur in succession
   - ii each individual aura symptom lasts 5 to 60 minutes
   - iii at least one aura symptom is unilateral
   - iv the aura is accompanied, or followed within 60 minutes, by headache

criterion 5

5. Believed by the patient to be migraine at onset and relieved by a triptan or ergot derivative

D. Not better accounted for by another ICHD-3 diagnosis

Abbreviation: ICHD-3 = *The International Classification of Headache Disorders* 3rd edition.

Adapted from *The International Classification of Headache Disorders* 3rd edition (beta version).[5]

Therapeutic options for chronic headache

Management of medication overuse

Limiting analgesic use for headaches helps avoid medication-overuse headache. The authors advise avoidance of combination analgesics, such as those containing caffeine, codeine or barbiturates. Patients can be instructed to reduce their headache medication by either 10% every week or two or, if there are no contraindications, to cease it immediately.[6] They should be encouraged to keep a headache diary and share these findings with their doctor. Sample diaries are available from Headache Australia (http://headacheaustralia.org.au/headache-management/7-chronic-headache-a-migraine-diaries). An NSAID (such as naproxen) taken once or twice daily can help with rebound headache.[7]

Once the use of acute headache medication has been reduced substantially, a preventive medication for the headache should be introduced (see below). The steps in the treatment of patients with medication-overuse headache and the options available to them are summarised in Boxes 4 and 5.[6,14]

Prophylactic pharmacological management

Chronic migraine

The first-line prophylactic medications for patients with chronic migraine include amitriptyline (off-label use), propranolol, sodium valproate (off-label use) and topiramate (Box 6). These medications are discussed below in more detail.

3. Chronic tension-type headache diagnostic criteria[5]

According to *The International Classification of Headache Disorders* (3rd edition), a diagnosis of chronic tension-type headache (ICHD-3 code 2.3) can be made if the following criteria are fulfilled.[5]

A. Headache occurring for an average of 15 or more days per month for more than three months (180 or more days per year) AND fulfilling criteria B, C and D

B. Headache lasts hours to days, or unremitting

C. Headache has at least two of:
- i bilateral location
- ii pressing or tightening (nonpulsating) quality
- iii mild or moderate intensity
- iv not aggravated by routine physical activity such as walking or climbing stairs

D. Both of the following:
- i no more than one of photophobia, phonophobia or mild nausea present
- ii neither moderate or severe nausea nor vomiting present

E. Not better accounted for by another ICHD-3 diagnosis

Abbreviation: ICHD-3 = *The International Classification of Headache Disorders* 3rd edition.

Adapted from *The International Classification of Headache Disorders* 3rd edition (beta version).[5]

4. Steps in the treatment of medication-overuse headache[6]

- Completely (100%) wean the patient off acute medication treatments
- Establish preventive medication and/or behavioural or nondrug preventive strategies
- Provide acute medication advice with clear limits (maximum dosages) to prevent further overuse
- Educate patient and family, and reassure the patient that there is no sinister pathology

5. Treatment options for medication-overuse headache[14]

- Outpatient treatment alone
- Infusion therapy
  - outpatient
  - inpatient
- Integrated program
  - day hospital
  - inpatient program

Second- and third-line agents for migraine prophylaxis include pizotifen (1.5 to 4.5 mg daily), botulinum toxin, gabapentin (300 to 1800 mg daily; off-label use), pregabalin (50 to 200 mg daily; off-label use), cyproheptadine (2 to 8 mg daily; off-label use for prophylaxis but TGA indicated for acute treatment of migraine), candesartan (8 to 32 mg daily; off-label use) and other tricyclic antidepressants (off-label uses). Some of these treatments (e.g. botulinum toxin) are restricted for use by, or need a supporting letter from, the appropriate specialist. Therefore, it may be advisable to refer the patient to a neurologist should they fail first-line treatment.

Chronic tension-type headache

Guidelines from the European Federation of Neurological Societies list several agents deemed effective as prophylactic medications for patients with chronic tension-type headache (Box 6).[15] These agents include amitriptyline (30 to 75 mg daily; off-label use), venlafaxine (150 mg daily; off-label use), mirtazapine (30 mg daily; off-label use) and clomipramine (75 to 150 mg daily; off-label use).[15]

Botulinum toxin appeared to be helpful for chronic tension-type headache (off-label use) in a few small open-label reports, but this benefit was not confirmed by a series of double-blind placebo-controlled studies.[16]

Prophylactic medications

Tricyclic antidepressants

Amitriptyline at doses of up to 1 mg/kg is very useful for prophylaxis of both chronic migraine and chronic tension-type headache (off-label use).[6,7] The patient is started on a low dose (amitriptyline 10 mg daily), which can be gradually increased. To avoid excessive morning sleepiness, the medication is best given 12 hours before the time the patient wishes to wake. Side effects the patient should be warned about include anticholinergic properties such as dry mouth, eyes, weight gain, nausea and lethargy. Dothiepin may be used as a second-line agent (off-label use) for chronic migraine.

Beta-blockers

Propranolol is the preferred beta-blocker for migraine prophylaxis and the patient can be commenced on a low dose (10 to 20 mg twice daily), which can be titrated up as heart rate and blood pressure allow. The tolerated dose depends on the patient's needs and generally prophylactic doses do not exceed 240 mg/day.[7] It should be avoided in patients with asthma, peripheral vascular disease and heart block. Metoprolol may be used as a second-line agent for migraine prophylaxis.

Sodium valproate

Sodium valproate has been shown to be superior to placebo in

6. Prophylactic pharmacological treatment options for chronic headache[14]

Chronic migraine

- First line
  - Amitriptyline*
  - Propranolol
  - Sodium valproate*
  - Topiramate
- Second line and third line
  - Botulinum toxin type A
  - Candesartan*
  - Cyproheptadine*†
  - Dothiepin*
  - Gabapentin*
  - Metoprolol
  - Pizotifen
  - Pregabalin*

Chronic tension-type headache[15]

- First line
  - Amitriptyline*
- Second line
  - Mirtazapine*
  - Venlafaxine*
- Third line
  - Clomipramine*

* Off-label use.
† Cyproheptadine is indicated for the acute treatment of migraine.

reducing general and maximum pain levels and frequency in patients with chronic daily headache (combination of chronic migraine and chronic tension-type headache).[17] Doses up to 1500 mg daily can be used (off-label use).[6] A regimen could consist of 200 mg twice daily, increasing to 400 mg or 600 mg twice daily as tolerated over two- to four-week intervals.[6] Blood count and liver enzymes should be checked at baseline, and the side effect profile (especially the teratogenic effects to women of childbearing age) should be explained.

Topiramate

Topiramate has been shown in placebo-controlled trials to control chronic migraine at a dose of 100 mg once daily.[18,19] Potential adverse effects from topiramate include paraesthesia, upper respiratory tract infection, renal stones, word finding difficulty and fatigue. This medication is safe to use regardless of the presence of acute medication overuse. The authors recommend titrating the topiramate slowly at 12.5 mg once a day and increasing each week or fortnight.

Topiramate can cause acute myopia and secondary angle closure glaucoma as well as visual field defects.[20] The primary treatment to reverse adverse effects is discontinuation of topiramate as rapidly as possible.

Botulinum toxin type A

Botulinum toxin type A is an effective prophylactic treatment for chronic migraine, and is indicated for prophylaxis of headaches in adults with chronic migraine.[21] To be eligible for a PBS-subsidy patients must have experienced an inadequate response, intolerance or a contraindication to at least three prophylactic migraine medications, and to be eligible for continuing PBS-subsidised treatment must have achieved and maintained a 50% or greater reduction from baseline in the number of headache days per month after two treatment cycles (each of 12 weeks duration).[21] A patient must be prescribed this treatment by a qualified neurology specialist to qualify for PBS subsidy.[11,22]

Newer treatment options

Calcitonin gene-related peptide (CGRP) and nitric oxide are endogenous substances regarded as key mediators in migraine and other primary headaches. CGRP and nitric oxide actions are associated with all levels of the trigeminovascular system, and central CGRP receptors may therefore be possible therapeutic targets.[23-26]

Supplements and complementary medications

Many patients benefit from taking magnesium, coenzyme Q10, riboflavin, butterbur or feverfew for headache prophylaxis.[27-33]

Nonpharmacological management

Nonpharmacological management for CHD includes lifestyle advice as mentioned previously and also acupuncture, sleep modification, psychological approaches, aerobic exercise, and nerve blocks and neurostimulation.

Acupuncture and behavioural sleep modification have weak evidence for headache prevention.[11,34-36] Psychological approaches found to be effective in patients with pain are biofeedback and cognitive behavioural therapy, as well as acceptance and commitment therapy.[37,38] Aerobic exercise has been shown to be effective for the prevention of migraine headaches.[39,40]

Nerve blocks and neurostimulation provide alternative therapeutic options in patients with head and neck neuralgias.[41] Occipital nerve stimulators may have a role to play for refractory headache, but the involvement of neurologists, neurosurgeons and pain specialists is warranted.[11]

Conclusion

CDH is a heterogenous group of disorders that can be challenging to recognise and manage. With the help of a systematic history, examination and review of medications, the GP can successfully manage a significant proportion of these patients. For more complex cases, specialist referral is advised. PMT

References

A list of references is included in the website version (www.medicinetoday.com.au) of this article.

COMPETING INTERESTS: None.

Chronic daily headache
How to assess and manage

DARSHAN GHIA MB BS(Hons), MD, DNB, FRACP
JACQUI SAW MB BS(Hons)

References

1. Pascual J, Colás R, Castillo J. Epidemiology of chronic daily headache. Curr Pain Headache Rep 2001; 5: 529-536.
2. Silberstein SD, Lipton RB, Solomon S, Mathew NT. Classification of daily and near-daily headaches: proposed revisions to the IHS criteria. Headache 1994; 34: 1-7.
3. Stovner LJ, Hagen K, Jensen R, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia 2007; 27: 193-210.
4. Yancey JR, Sheridan R, Koren KG. Chronic daily headache: diagnosis and management. Am Fam Physician 2014; 89: 642-648.
5. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia 2013; 33: 629-808.
6. Goadsby PJ, Boes C. Chronic daily headache. J Neurol Neurosurg Psychiatry 2002; 72(Suppl 2): ii2-ii5.
7. Beran RG. Management of chronic headache. Aust Fam Physician 2014; 43: 106-110.
8. Natoli JL, Manack A, Dean B, et al. Global prevalence of chronic migraine: a systematic review. Cephalalgia 2010; 30: 599-609.
9. Lipton RB. Tracing transformation: chronic migraine classification, progression, and epidemiology. Neurology 2009; 72(5 Suppl): S3-S7.
10. Manack A, Buse DC, Serrano D, Turkel CC, Lipton RB. Rates, predictors, and consequences of remission from chronic migraine to episodic migraine. Neurology 2011; 76: 711-718.
11. Diener HC, Dodick DW, Goadsby PJ, Lipton RB, Olesen J, Silberstein SD. Chronic migraine – classification, characteristics and treatment. Nat Rev Neurol 2012; 8: 162-171.
12. Bigal ME, Serrano D, Buse D, Scher A, Stewart WF, Lipton RB. Acute migraine medications and evolution from episodic to chronic migraine: a longitudinal population-based study. Headache 2008; 48: 1157-1168.
13. Dodick DW. Clinical practice. Chronic daily headache. N Engl J Med 2006; 354: 158-165.
14. Tepper SJ. Medication-overuse headache. Continuum (Minneap Minn) 2012; 18: 807-822.
15. Bendtsen L, Evers S, Linde M, Mitsikostas DD, Sandrini G, Schoenen J; EFNS. EFNS guideline on the treatment of tension-type headache – report of an EFNS task force. Eur J Neurol 2010; 17: 1318-1325.
16. Naumann M, So Y, Argoff CE, et al; Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Assessment: botulinum neurotoxin in the treatment of autonomic disorders and pain (an evidence-based review): report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Neurology 2008; 70: 1707-1714.
17. Yurekli VA, Akhan G, Kutluhan S, Uzar E, Koyuncuoglu HR, Gultekin F. The effect of sodium valproate on chronic daily headache and its subgroups. J Headache Pain 2008; 9: 37-41.
18. Diener HC, Bussone G, Van Oene JC, Lahaye M, Schwalen S, Goadsby PJ; TOPMAT-MIG-201 (TOP-CHROME) Study Group. Topiramate reduces headache days in chronic migraine: a randomized, double-blind, placebo-controlled study. Cephalalgia 2007; 27: 814-823.
19. Silberstein SD, Lipton RB, Dodick DW, et al; Topiramate Chronic Migraine Study Group. Efficacy and safety of topiramate for the treatment of chronic migraine: a randomized, double-blind, placebo-controlled trial. Headache 2007; 47: 170-180.
20. Apo-Topiramate product information. Available online at: https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2010-PI-06641-3 (accessed January 2015).
21. Dodick DW, Turkel CC, DeGryse RE, et al; PREEMPT Chronic Migraine Study Group. OnabotulinumtoxinA for treatment of chronic migraine: pooled results from the double-blind, randomized, placebo-controlled phases of the PREEMPT clinical program. Headache 2010; 50: 921-936.
22. Australian Government Department of Human Services. PBS listing of Botulinum toxin. Available online at: http://www.medicareaustralia.gov.au/provider/pbs/drugs1/botulinum.jsp (accessed January 2015).
23. Messlinger K, Lennerz JK, Eberhardt M, Fischer MJ. CGRP and NO in the trigeminal system: mechanisms and role in headache generation. Headache 2012; 52: 1411-1427.
24. Arulmani U, Maassenvandenbrink A, Villalón CM, Saxena PR. Calcitonin gene-related peptide and its role in migraine pathophysiology. Eur J Pharmacol 2004; 500: 315-330.
25. Olesen J, Thomsen LL, Lassen LH, Olesen IJ. The nitric oxide hypothesis of migraine and other vascular headaches. Cephalalgia 1995; 15: 94-100.
26. Villalón CM, Olesen J. The role of CGRP in the pathophysiology of migraine and efficacy of CGRP receptor antagonists as acute antimigraine drugs. Pharmacol Ther 2009; 124: 309-323.
27. Peikert A, Wilimzig C, Köhne-Volland R. Prophylaxis of migraine with oral

magnesium: results from a prospective, multi-center, placebo-controlled and double-blind randomized study. Cephalalgia 1996; 16: 257-263.
28. Mauskop A, Altura BM. Role of magnesium in the pathogenesis and treatment of migraines. Clin Neurosci 1998; 5: 24-27.
29. Sándor PS, Di Clemente L, Coppola G, et al. Efficacy of coenzyme Q10 in migraine prophylaxis: a randomized controlled trial. Neurology 2005; 64: 713-715.
30. Lipton RB, Göbel H, Einhäupl KM, Wilks K, Mauskop A. Petasites hybridus root (butterbur) is an effective preventive treatment for migraine. Neurology 2004; 63: 2240-2244.
31. Schoenen J, Jacquy J, Lanaerts M. Effectiveness of high-dose riboflavin in migraine prophylaxis. A randomized controlled trial. Neurology 1998; 50: 466-470.
32. Diener HC, Pfaffenrath V, Schnitker J, Friede M, Henneicke-von Zepelin HH. Efficacy and safety of 6.25 mg t.i.d. feverfew CO2-extract (MIG-99) in migraine prevention – a randomized, double-blind, multicentre, placebo-controlled study. Cephalalgia 2005; 25: 1031-1041.
33. Holland S, Silberstein SD, Freitag F, et al. Evidence-based guideline update: NSAIDS and other complementary treatments for episodic migraine prevention in adults: report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. Neurology 2012; 78: 1346-1373.
34. Calhoun AH, Ford S. Behavioral sleep modification may revert transformed migraine to episodic migraine. Headache 2007; 47: 1178-1183.
35. Jena S, Witt CM, Brinkhaus B, Wegscheider K, Willich SN. Acupuncture in patients with headache. Cephalalgia 2008; 28: 969-979.
36. Diener HC. Acupuncture for the treatment of headaches: more than sticking needles into humans? Cephalalgia 2008; 28: 911-913.
37. Wetherell JL, Afari N, Rutledge T, et al. A randomized, controlled trial of acceptance and commitment therapy and cognitive-behavioral therapy for chronic pain. Pain 2011; 152: 2098-2107.
38. Nestoriuc Y, Martin A. Efficacy of biofeedback for migraine: a meta-analysis. Pain 2007; 128: 111-127.
39. Varkey E, Hagen K, Zwart JA, Linde M. Physical activity and headache: results from the Nord-Trøndelag Health Study (HUNT). Cephalalgia 2008; 28: 1292-1297.
40. Varkey E, Cider A, Carlsson J, Linde M. Exercise as migraine prophylaxis: a randomized study using relaxation and topiramate as controls. Cephalalgia 2011; 31: 1428-1438.
41. Levin M. Nerve blocks in the treatment of headache. Neurotherapeutics 2010; 7: 197-203.