Acupuncture in Physiotherapy

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The Association
The British association for the practice of Western research-based acupuncture in physiotherapy, AACP is a professional network affiliated with the Chartered Society of Physiotherapy. It is a member-led organization, and with around 6000 subscribers, the largest professional body for acupuncture in the UK. We represent our members with lawmakers, the public, the National Health Service and private health insurers. The organization facilitates and evaluates postgraduate education. The development of professional awareness and clinical skills in acupuncture are founded on research-based evidence and the audit of clinical outcomes.

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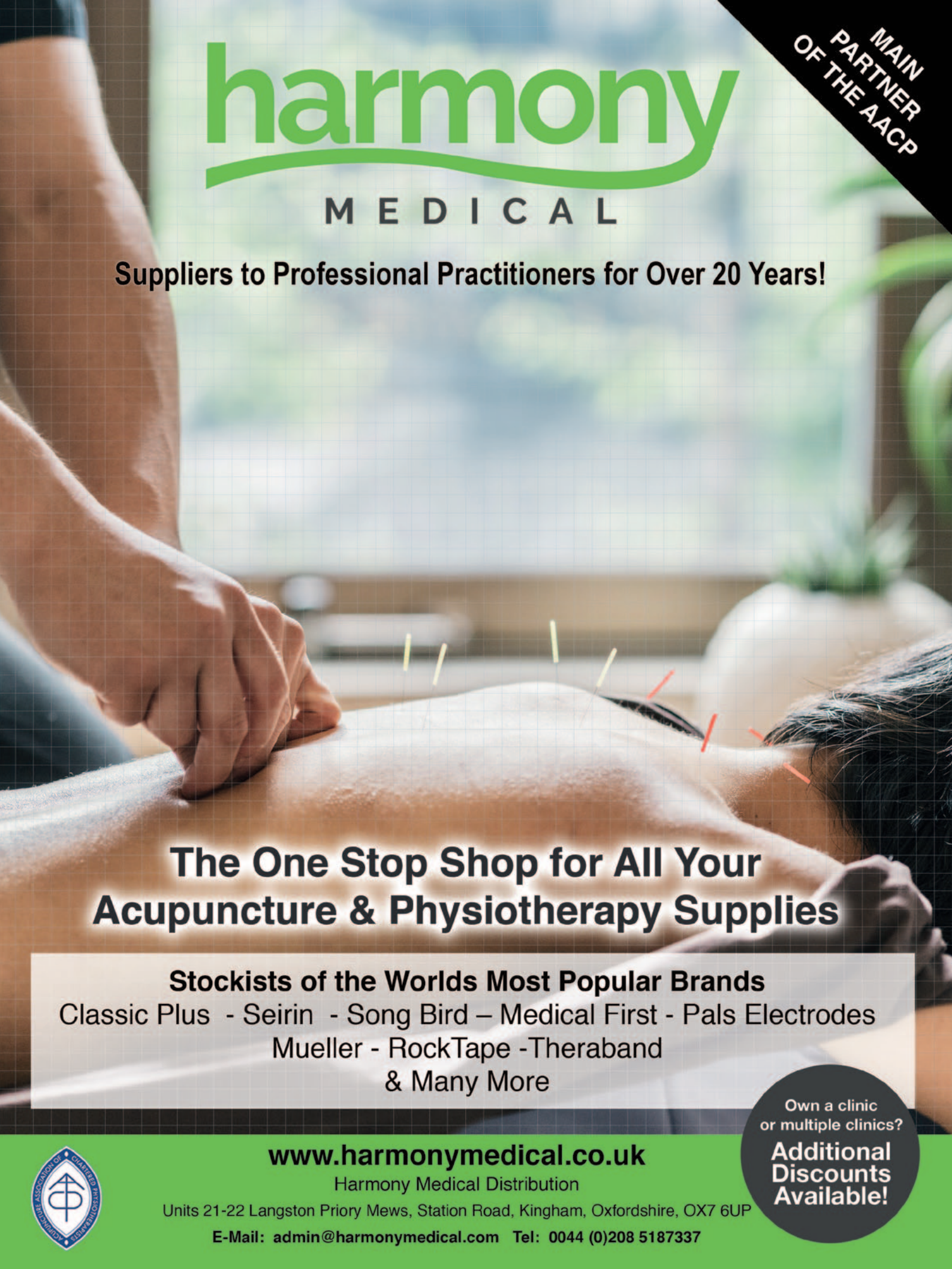
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Acupuncture in Physiotherapy

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Editorial

"Spring has well and truly sprung" is at the forefront of my mind as I gaze out of the window whilst reflecting on this edition of *Acupuncture in Physiotherapy*, and my first full issue as Clinical Editor. Just as the radiant daffodils and snowdrops raise their heads to give some colour to the lifeless garden, the world seems to be turning a positive corner in the now 12-month battle with coronavirus. The last year has seen changes in healthcare like no other, with physiotherapists and colleagues showing their adaptability and resolve to work together, sometimes in environments alien to their everyday job roles, be it in patient settings or at home, schooling their children.

These enforced changes may have pushed some of us to the very limit of our capabilities, but it will have given many a chance to do things differently by diversifying the way that they work and provide care (e.g. virtual treatments) or maybe spending more time with their family (which I know I have enjoyed myself). Variety is, after all, the spice of life. However, many of us may feel that variety is exactly what has been lacking as we seek the end of another national lockdown. I hope that most of the AACP membership will have started to be able to offer treatments in person again (as acupuncture is not something that translates to being virtual!) and see a return to the diversity of patients that we are lucky to benefit from as a profession.

Variety is also what we aim to deliver with the Spring 2021 edition of the Journal. Starting with original work, Chris Norris provides us with an in-depth exploration of "Acupuncture in the treatment of headaches" (pp. 11–16). Chris is a hugely experienced practitioner and AACP tutor who has presented a background on headaches and their causes, along with combining the latest research with his own thoughts on how best to use acupuncture to help.

Acupuncture in oncology is really proving to be an emerging area for both practitioners and researchers, as the benefits of needling for this client group get more and more attention. It is

this holistic and joined-up approach to treating those suffering from chemotherapy-induced peripheral neuropathy (CIPN) that provides a focus for our second piece of original work by Deepa Morar and Dan Tan (pp. 17–26). CIPN is a condition that some AACP members will have treated, but many will not, and this piece really gives an insight into the role that acupuncture can play in supporting these individuals who have already gone through so much.

The first of two reprints in this edition is a fascinating study by McKee *et al.* (pp. 27–42) which highlights an approach to needling for the masses that might have taken a backseat in the past 12 months given the need for social distancing – group acupuncture. The comparison of treating patients in a challenging urban setting on either an individual basis, or as a group, is something that leaves food for thought for when we no longer have to worry about our proximity to one another.

In our second reprint, we consider the possible use of acupuncture to treat patients with COVID-19. As this new disease has taken a grip on the entire planet, many approaches have been suggested to treat those suffering from the worst symptoms, which we know can last for a great while after the initial infection. It is worth bearing in mind that this article by Sun & Zhou (pp. 43–51) titled "Acupuncture in the treatment of COVID-19", was written and published in February 2020, and so much has changed with the now rapid roll-out of vaccines and other beneficial pharmacological treatments. This article provides a view of COVID-19 from a traditional Chinese medicine standpoint, and therefore how acupuncture can play a role in aiding those suffering from it.

There is diversity too in our series of five case reports. The first returns to the topic of headaches and recounts the treatment of a patient with chronic episodic tension headaches and depression by Vincenzo Allocca (pp. 53–61).

Next, we also revisit oncology, as Bethan Pankhurst demonstrates how acupuncture can benefit breast cancer patients suffering from an onset of hot flushes (pp. 63–69).

Our third case report by Louise Foster (pp. 71–76) introduces a patient suffering from facioscapulohumeral muscular dystrophy, a unique condition that leaves sufferers with many debilitating issues. Louise demonstrates how she used acupuncture as a treatment modality to counteract some of these problems and aid the client's rehabilitation.

On pages 77–82, Ruth Bradley *et al.* present a case for the use of acupuncture in adhesive capsulitis, a condition which most therapists will have toiled with over the years. However, this intriguing report explores the treatment of this tricky problem following the implant of a left ventricular assist device (LVAD) in an inpatient setting.

Finally, we return to a more commonly treated issue, low back pain, in a case report by Jessica Foxley (pp. 83–90). Jessica focuses on the rehabilitation of a young, physically fit office worker, in which the author also confronts her own scepticism about the use of acupuncture in this area.

I hope you find this mix of narrative work and research, studies and case reports to be as interesting and useful as I do, and may it provide you with a chance to remember how we as professionals continue to make a difference to patients' lives, even in the face of adversity.

Rob Westney
Clinical Editor

Acupuncture in Physiotherapy, Volume 33, Number 1, Spring 2021, 7–8

Chairman's report

Welcome to the latest edition of the AACP journal *Acupuncture in Physiotherapy* for spring 2021. As 2021 rolls on from 2020, many of us are still facing the ongoing challenges and disruptions that have been in place for over a year now. Whilst many of you operate in modified environments, the AACP has done the same and adaptations have been required to survive these challenging times. All those involved behind the scenes within the AACP have been working hard to continue to support members. The AACP has published two sets of guidelines during the COVID era that have been designed to give a clear pathway to members regarding clinical practice during these days of modified working practices. The AACP also continues to collaborate with the British Medical Acupuncture Society (BMAS) and other acupuncture organizations to ensure best practice in all environments.

During 2020, the AACP released a series of 10 free videos drawn from popular conference presentations from the last few years to support members with their continuing professional development (CPD) requirements. These are still available to download from the members' area on the AACP website. Two free downloadable apps (*AACP App* and *The Manual of Acupuncture*) that are available as member benefits are also great tools to support learning, and both include numerous videos on point location. The *AACP App* also carries all the *Acupuncture in Physiotherapy* journals since spring 2007 in electronic format, whilst *The Manual of Acupuncture* app is an electronic version of the textbook of the same name by Peter Deadman.

As with many events in the earlier part of this year, the AACP 2021 conference will be virtual. It will be held on 8 May 2021 and be accessible from the comfort of your own home for a member's discounted rate of just £20 (£50 for non-members) for 8 hours of CPD. This year's erudite speakers include Dr Mike Cummings (Medical Director of BMAS) presenting "An Overview of Acupuncture in Pain Management and Pain Prevention", Dr Philip DePrez discussing "NICE Guidelines and The Importance of Research and Training", and Ian Gatt (of Team GB) giving an insight into "Upper Limb Injuries in Sports" and whether needles are of any use. Dr Christopher Norris will be presenting his article "Acupuncture Treatment for Irritable Bowel Syndrome" and Professor Tianjun Wang will give an introduction on "Scalp Acupuncture for Stroke". Also adding further breadth to the event will be Chris Nortley giving an overview of "The Spirits of the Points" and Dr Vivien Shaw (acupuncturist and lecturer in anatomy) revealing "Anatomy in Ancient China". It promises to be an enlightening event on all levels, and I would recommend your attendance if possible.

Following recent government guidance we have a scheduled increase in face-to-face training planned out, which will continue to employ appropriate PPE and standards of safe practice. During this time, however, training events may be subject to change with notifications from the government and the AACP will remain as flexible and responsive to requirements as possible. Members are encouraged to get in touch with the AACP if they wish to support the ongoing return of the training provision or if they have access to venues or wish to request courses in their region.

It is excellent news that the finalized "NICE Guidelines for Chronic Pain: assessment and management" recommend the use of acupuncture or dry needling for chronic primary pain, if delivered in the community, with a maximum of 5 hours of treatment from clinical healthcare professionals (bands 5–7). After reviewing the evidence, the NICE committee acknowledged that there is a specific treatment effect of acupuncture and a large evidence base showing acupuncture to be clinically effective in the short term (3 months). They also stated that robust

economic evaluations showed that acupuncture is cost-effective.

Also of note is the move of Paul Battersby from interim to permanent CEO. A fellow of the AACP, many of you will know Paul as an AACP tutor, former regional representative, board member and clinical advisor. He now takes on the permanent role of CEO after care-taking the position since October 2019. Paul has already proven himself in these challenging times but please join with me in wishing him the greatest of success in the role of CEO for himself, the AACP and its membership.

In conclusion, I would like to thank you as ever for your ongoing loyal support for the AACP. These have been difficult times for many of us and the AACP has weathered the storm and will be better informed for the experience going forward. As ever, if you feel there are issues the AACP needs to address, or areas where you would like to see the AACP develop or improve, then please feel free to get in touch with the office or me directly (chair@aacp.uk.com). More now than ever, I am looking forward to getting out and teaching again and catching up with you in person at an AACP event somewhere soon.

Jonathan Hobbs
AACP Chairman

Chief Executive Officer's report

Hello to all readers of our Journal. My wish is that you are all safe and well in these turbulent times. Even though there have been many restrictions, we have been busy developing the client relationship management (CRM) system and website which will be going live imminently. We have also been planning our virtual conference which takes place on 8 May 2021 – if you have not booked your place by now, hurry, it's nearly upon us! There is a great line-up of speakers, all experts in their fields, so try not to miss it as it has never been so accessible.

An improvement we have already made to the AACP website is the addition of Quest Four services. These include access to health and safety advice, an HR service and advice, a legal service and a tax advice service, all under one roof. This is a membership benefit so I do encourage you to access this service and make use of it.

The AACP has recruited a new board member, so please welcome Dawn Aiken who joins us as our Ireland representative. Can I remind you that if any of you feel that you have something to offer the AACP, please download an application form and put it forward to me along with your CV so that the board can select suitable members to help run the organization. There are also other positions that may interest people so have a good look at the website.

Our next AGM is scheduled for 7 July 2021 at 10am. It will be via Zoom and more information will be delivered to you in our monthly newsletter (via email) so that you can vote, and of course via the website.

The AACP is now a member of the International Acupuncture Association of Physical Therapists (IAAPTI). There are regular IAAPTI newsletters as well as information on continuing professional development (CPD) on the website, so please access and utilize the information. This is a further contribution to building on the positive development of services to members that has already been achieved in recent years.

Whilst most successful and efficient organizations work within a structure of a centralized planning and operational "core", it is vital that this sits within an overall framework of knowledge and understanding of the needs and demands of the whole membership. For this to be achieved it is crucial that there is effective "two-way" communication to create the best understanding of what your requirements are and the actual range of services that are, or will be, available. It would be very useful to receive members' comments or even criticisms on these matters (ceo@aacp.uk.com).

We already have channels of communication such as the Journal, our conferences, the HQ office staff and services, and of course our website, but improvements can always be made and there are several plans to achieve these over the next few months. However, it is evident that there are quite a few members who seem to have little or no communication with the Association either directly through participation or more indirectly via the website.

Of course, it may be that this is a sign of satisfaction with the more general benefits of membership, but it would be useful to be a lot clearer on this issue as we continue with our improvement agenda. We may, therefore, conduct several mini-surveys to seek out some deeper background information from you and I would hope that if you are approached you will be able to spare a few minutes of your time to assist.

We do get considerable and favourable feedback about the interest and value of the Journal itself, but since this is only published twice a year I will end my report by again encouraging all readers to access our website on a frequent basis as we seek to further develop this as a main information, education and research facility.

Paul Battersby
Chief Executive Officer

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PAIN MANAGEMENT & PREVENTION

VIVIAN SHAW

ANATOMY IN ANCIENT CHINA

Acupuncture in Physiotherapy, Volume 33, Number 1, Spring 2021, 11–16

NARRATIVE REVIEW

Acupuncture treatment of headaches

C. M. Norris
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Abstract

Headache occurs in up to 40% of adults in the UK and may be divided into primary and secondary types, with primary types being reviewed. Headaches may be caused through irritation of the dura mater and cranial blood vessels, or mechanical changes in the sub-occipital tissues. Treatment of primary headache includes lifestyle changes, medication and physiotherapy. Acupuncture and dry needling have been shown to be effective adjuncts to these methods, and evidence supporting needling intervention is overviewed. Prior to needling, full patient examination is required to identify potential red flags, and clinician guidance using the SNOOP pneumonic is presented. Both acupuncture and dry needling methods give equal results, and choice of point location is normally based on symptom modification. Local and distal points are typically selected to engage descending pain reduction effects. Acupuncture and dry needling points for the treatment of headaches are described and their target muscles highlighted, using a clinical reasoning approach.

Keywords: acupuncture, clinical reasoning, dry needling, headaches, pain, red flags.

Introduction

Headache is defined as pain behind the eyes and ears, or in the upper part of the neck (BMJ Best Practice 2016). It occurs in 40% of people in the UK, with migraine seen in 15% of adults. However, up to 80% of individuals state that tension-type headaches are a normal occurrence for them at some time in their lives (BASH 2010).

Headache types

Headaches may be broadly categorized as primary (not associated with an underlying condition) or secondary (occurring as a result of an underlying local or systemic pathology). Main headache classifications are shown in Table 1. The brain itself has no sensory receptors, and the pain of headache is likely the result of irritation to the dura mater and cranial blood vessels. Additionally, cervicogenic (sub-occipital) headaches may occur due to changes in the local musculature and/or alteration to the trigeminal cervical nucleus (the convergence of the sensory fibres from the trigeminal nerve in the brain stem with those of the upper cervical nerves roots C1-C3).

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Table 1. Main headache classifications

Primary	Secondary
Not associated with underlying pathology: • migraine • tension • cluster headache	Result of underlying local or systemic pathology: • trauma to the head or neck • intracerebral infection • vascular disorder • medication • neoplasm

Source: NICE 2019

Migraine is a primary headache which may present with or without aura (transient neurological symptoms). This type of headache is typically unilateral and throbbing in nature and may last 4–72 h. The condition is more common in women (two to three times) and can reduce during pregnancy. Triggers such as stress, dehydration, food changes or disturbed sleep may be identified, and avoiding these together with lifestyle changes form part of the condition management (NICE 2019). Migraine itself has been described as due to vasodilatation of extracranial vessels, while the aura is thought to be due to vasocontraction (Grant 2016). Over the counter (OTC) analgesia, antiemetics, and preventive medication such as beta-blockers (propranolol) and antiepileptics (topiramate) are typically used, depending on the severity of symptoms.

Cluster headaches are less common, occurring in about 0.05% of the population with 70% of patients under 30 years of age. Males are affected more than females (6:1 ratio). The nature may be episodic (85% of cases) or chronic. Generally, attacks are briefer than migraine (<3 h) and focused over the eye or temporal region. Cluster headache has been described as a trigeminal autonomic cephalalgia (Benoliel 2012), in that it is associated with autonomic features on the same side as the pain such as changes in lacrimation, nasal congestion, eyelid oedema, ptosis and rhinorrhoea. Medication may typically include triptans, which stimulate production of the neurotransmitter serotonin aiming to constrict blood vessels and reduce inflammation.

Tension-type headaches may be subcategorized as frequent (10 episodes within 14 days), infrequent (< 1 day of headache per month) or chronic (15 or more days of headache per month). They typically present as generalized pressure or tightness around the head spreading into, or from, the neck. Intensity tends to be milder than migraine or cluster-type and the condition is normally managed using analgesia and anti-inflammatories. Sometimes a mild antidepressant such as amitriptyline may be used preventively.

Patient examination

It is vital to screen patients for headache red flags, as headache may be a symptom of serious pathology. The pneumonic SNOOP (Table 2) is useful to guide clinicians. Signs of systemic disease such as weight loss, fever or fatigue require further investigation, as do abnormal neurological signs which may suggest a focal neurological lesion (Smith 2018). Secondary headache may be associated with additional symptoms in older patients especially where there is a sudden non-traumatic onset. Progression of a headache from time of onset is important, as musculoskeletal-oriented headaches are often self-limiting. Headaches which are progressive or show cranial nerve signs, positional precipitation or a link to exertion or straining (Valsalva) may indicate a structural pathology and warrant further investigation.

Effectiveness of acupuncture in the treatment of headaches

The use of acupuncture in the management of headaches has been investigated by large German healthcare trials, and two Cochrane systematic reviews have been produced. Several trials looked at the effectiveness of acupuncture for chronic conditions. The ART (Acupuncture Randomized Trials), ARC (Acupuncture in Routine Care), COMP (comparative trial) and GERAC (German Acupuncture Trial) compared

Table 2. SNOOP screening pneumonic

	Clinical features	Exclude
S	Systemic signs and disorders (fever or weight loss)	Infection, metastasis, HIV
N	Neurological symptoms +/- abnormal signs	Stroke, mass lesion, encephalitis
O	Older (new or changed) in patient > 50 years old	Temporal arteritis, glaucoma
O	Onset in thunderclap presentation	Bleed
P	Papilledema, pulsatile tinnitus, postural/positional provocation, precipitated by exercise, progressive pattern	Altered intracranial pressure, secondary cause, cervicogenic

Data from BASH 2010; BMJ 2016; Smith 2018

acupuncture, sham acupuncture, medication and standard care (Cummings 2009), and the results were published in several papers.

Comparing acupuncture and sham acupuncture (dry needling) with a waiting list control in patients with tension-type headache (270 patients, 12 sessions over 8 weeks), the number of days with headache decreased by an average of 7.2 (acupuncture) and 6.6 (dry needling), compared to 1.5 for the waiting list patients (Melchart *et al.* 2005), showing that needling is effective but acupuncture using traditional points is not superior to superficial dry needling of local non-acupuncture points. Using a similar protocol (302 patients, 12 sessions per patient over 8 weeks) both acupuncture and dry needling were more effective (2.2 days reduction) than waiting list control (0.8 days reduction) after 12 weeks (Linde *et al.* 2005). Use of acupuncture and dry needling was also investigated in tension-type headache in a larger study (Diener *et al.* 2006). Looking at 409 patients (10 sessions of 30 min duration over a period of 6 weeks), response was set as greater than 50% reduction in headache days per month over a 6-month period. Both groups achieved the response rate (acupuncture group 33%, dry needling 27%).

Acupuncture has been shown to be similarly effective to the beta-blocker metoprolol for migraine prophylaxis (number of migraine days reduced = 2.5 acupuncture, 2.2 metoprolol) but with fewer adverse effects reported by both examining physicians and patients (Streng *et al.* 2006). Looking at 960 patients using acupuncture, dry needling or continuous drug prophylaxis for migraine, Diener *et al.* (2006) set a response rate of a 50% reduction in migraine days 26 weeks after randomization. This was achieved by acupuncture (47%), dry needling (39%) and standard drug treatment (40%), showing no difference in outcomes. Analyzing 15 056 primary headache patients treated with routine care or routine care plus acupuncture (up to 15 sessions over 3 months), Jena *et al.* (2008) showed a reduction of headache days from 8.4 to 4.7 for the routine care plus acupuncture group, and from 8.1 to 7.5 in the control group receiving no acupuncture, demonstrating a "marked clinical improvement" according to the authors.

Two Cochrane reviews were published summarizing the evidence for acupuncture treatment of migraine and tension-type headaches. For migraine (Linde *et al.* 2016b), the authors reviewed 22 trials including 4985 participants and found adding acupuncture to treatment reduced headache frequency, and that true acupuncture gave a small but greater effect over dry needling. The trials showed acupuncture to be similarly effective to prophylactic drugs, leading the authors to conclude that acupuncture can be considered a viable treatment option for this condition. For tension-type headache (Linde *et al.* 2016a), the authors reviewed 12 trials with a total of 2349 participants and concluded that acupuncture is effective for treating both episodic and chronic tension-type headaches.

The NICE guidance pathway for the management of headaches (NICE 2012) recommends practitioners consider a course of up to 10 sessions of acupuncture over 5–8 weeks for the prophylactic treatment of chronic tension-type headache and chronic migraine.

Acupuncture and dry needling technique

Acupuncture has effects at several structural levels (Table 3), and these effects may be preferentially stimulated by varying needling strength (manual or electrical stimulation) and point selection.

Table 3. Acupuncture effects at different structural levels

Site	Effect
Local	Local mediators of inflammation and pain
	Local neurotransmitter activity
	Increased local blood flow
	Myofascial trigger point (MTrP) changes
Spinal	Altered dorsal horn activity
	Changes to pain referral area
	Bidirectional stimulatory effect
	Reduced substance P concentration at dorsal horn
	Autonomic changes
Brainstem	Thalamus
	Descending inhibition
Cortex	Changes to sensorimotor processing
	Changes to limbic system
	Alteration in default mode network (DMN)

Data from White *et al.* 2018; Fernández-de-Las-Peñas & Nils 2019

Acupuncture points may be selected using a Western medical acupuncture (WMA) or traditional Chinese acupuncture (TCA) approach. The difference is mainly the method of patient assessment and the anatomical location of points. In WMA, it is common for practitioners to palpate a point at a precise anatomical location, but to vary the needling site according to palpation findings. In TCA, classical points are described at set locations, with Ah Shi points varying according to palpation findings. Both acupuncture and dry needling have been shown to be effective for the treatment of headaches, with needling by physiotherapists typically used together with other techniques such as manual therapy, exercise therapy and lifestyle advice. Needling has also been used with drug prophylaxis or analgesia as an alternative to drug therapy where patients show adverse effects or due to patient choice.

Local acupuncture points within the posterior neck and shoulders, or dry needling targets in these tissues, are usually augmented with distal points in the hands and feet to produce pain reduction through descending inhibition via diffuse noxious inhibitory control (DNIC). Typically, Gall Bladder (GB) 20 is used to target semisplenius capitus at the skull base or splenius capitus caudally, and GB 21 to target the upper trapezius. Tightness and ischaemia in these muscles is typical in a head forward posture where the upper (sub-occipital) cervical spine is forced into extension and held in this position throughout large portions of the working day. In addition, a shrugged shoulder posture associated with physical or psychological stress may give local muscle pain and palpable trigger points. Trapezius myalgia (TM), associated with tightness and stiffness in the upper trapezius, may be targeted with trigger points to the local region. However, no change in muscle morphology is found between patients with TM and healthy controls (De Meulemeester *et al.* 2017), suggesting that effects of dry needling into this region are mainly through a pain reduction response.

When needling Bladder (BL) 10 level with the C1 spinous process, the needle targets obliquus capitus inferior, one of the suboccipital group with a rich proprioceptive nerve supply, active in accurate head positioning tasks. As such, the suboccipitals in general are often associated with mechanical headaches and whiplash associated disorder (WAD) and targeted in sensorimotor rehabilitation programmes for the head and neck (Jull *et al.* 2008). BL 11 may be used to target the middle trapezius and cervical erector spinae lying over the rhomboid minor, and Governor Vessel (GV) points (14, 15, 16) or central dry needling to target the interspinous ligament. Where pain extends over the eyes, GB 14 or yintang may be used to target the frontalis muscle. If pain refers to the scalp, GV 20 at the skull vertex may be used, to affect occipitofrontalis. This is traditionally a powerful point in TCA as it is a meeting point of several acupuncture meridians (GV, BL, GB, Triple Energizer (TE) & Liver (LR)). When temporal pain is present, Stomach (ST) 8 may be used as a local point to target the epicranial tissues.

Distal points in the hands and feet such as Large Intestine (LI) 4 and LR 3 typically give powerful effects to augment the local points. Known as the "Four Gates" in TCA, these points have parallel anatomical locations, both targeting the first dorsal interosseous muscles (hand and foot respectively) and lying close to major vessels. LI 4 lies distal to the radial artery, LR 3 distal to the dorsalis pedis artery. Both arteries lie at the apices of their respective first web spaces. ST 36 is often used as a major point for sustained central effects. This point has been shown to increase functional connectivity of the default mode network (DMN) to other brain regions when compared to control points located both in the same and different dermatomes (Long *et al.* 2016), and to enhance immunity measured as cytokine and T-cell levels compared to controls (Chen *et al.* 2017).

TCA approaches to headache management typically begin by identifying patterns based on internal organ function according to traditional Chinese beliefs, the presence of environmental pathogens and the position of the acupuncture meridian. Headache with pain to the sides of the head tends to represent the GB meridian, while the occiput represents the BL meridian. Facial symptoms may be ST or GB meridians and points would be selected locally or distally

along these channels. Local meridians travelling over the head may be invaded by Wind pathogen, indicated by symptoms which get worse in windy or cold conditions, and symptoms which often change in nature. Where patients feel that their head is hot, the pattern may be one relating to the liver organ in Chinese medicine, and distal liver or gall bladder points such as LR 3 or GB 43 may be used in addition to local head points. Finally, where the headache is related to low energy (deficiency), major points such as ST 36 may be used to enhance energy.

Although the diagnosis in TCA may differ from that of WMA, points selected are often similar, and many treatment protocols used and researched in the West have often taken their point selection from TCA approaches originally.

Conclusion

Both acupuncture using classical Chinese points, and dry needling using local tissue responses, have demonstrated effectiveness in the management of headaches, but one is not superior to the other. Local and systemic responses are likely due to both psychological and physiological effects, fitting in with the biopsychosocial (BPS) model of healthcare currently used within physiotherapy. It is recommended that healthcare practitioners consider acupuncture and dry needling as part of any potential care package for the management of headache after full patient examination and within a clinical reasoning framework. It is likely that needling of this type will be adjunctive to, but not replace, other forms of management.

Appendix

Point locations and needling methods

Point (code)	Location (surface anatomy and cun measurement)	Needling method (traditional)	Relevant anatomy (muscle and myotome)
ST 36	Below the knee, 3 cun* inferior to the lateral infrapatellar sulcus (ST 35) and 1 finger width lateral to the anterior crest of the tibia	Perpendicular insertion 1–1.5 cun	Tibialis anterior muscle (L4/5)
LI 4	On the dorsum of the hand, between the first and second metacarpal bones. Level with the midpoint of the second metacarpal bone	Perpendicular insertion 0.5–1 cun	First dorsal interosseous muscle and adductor pollicis (T1)
LR 3	On the dorsum of the foot, in the depression distal to the junction of the first and second metatarsal bones	Perpendicular insertion 0.5–0.8 cun	First dorsal interosseous muscle (S2/3)
GB 20	Below the occiput, approximately midway between the mastoid process and the external occipital protuberance	Oblique insertion directed towards the tip of the nose, 0.8–1.2 cun	Semispinalis capitis (C1/2)
GB 21	At the level of the midpoint between C7 and the tip of the acromion, at the highest point of the trapezius muscle	0.5–0.8 cun oblique anteriorly or posteriorly	Upper trapezius (C3/4)
GV 14	At the base of the neck in the depression below the spinous process of C7	Oblique cranial insertion 0.5–1 cun	Interspinous ligament (C8)
GV 20	At the vertex of the head, midway between a line drawn between the two auricular apices	Transverse insertion 0.5 cun	Occipitofrontalis (facial nerve)
Yintang	On the midline of the forehead, between the eyebrows	0.3–0.5 cun subcutaneous	Periosteum (facial nerve)
GB 14	On the forehead directly above the pupil, 1 cun superior to the middle of the eyebrow	0.3–0.5 cun transverse	Frontalis (facial nerve)
BL 10	On the lateral aspect of the trapezius muscle, 1.3 cun lateral to the 1st cervical vertebral (C1)	Perpendicular insertion 0.5 cun	Obliquus inferior (C1–5)
BL 11	1.5 lateral to the lower border of the T1 spinous process approximately level with the superior angle of the scapula	Oblique insertion medially towards the spine, 0.5 cun	Rhomboid minor (C4/5)
ST 8	At the temple 4.5 cun lateral to the midline and 0.5 cun within the anterior hairline	Transverse subcutaneous insertion 0.5 cun	Epicranial tissues (facial nerve)

* 1 cun is the width of the patient's thumb at the distal interphalangeal joint
ST = Stomach; LI = Large Intestine; LR = Liver; GB = Gall Bladder; GV = Governor Vessel; BL = Bladder.
Data from Norris 2011; White *et al.* 2018

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