Australian Journal of Acupuncture and Chinese Medicine

CONTENTS

2008 VOLUME 3 ISSUE 2

AACMA
AUSTRALIAN ACUPUNCTURE & CHINESE MEDICINE ASSOCIATION LTD
ACN 010 020 390

Australian Journal of Acupuncture and Chinese Medicine

A PEER-REVIEWED JOURNAL

The *Australian Journal of Acupuncture and Chinese Medicine* (AJACM) is the official journal of the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA). It is Australia's only peer-reviewed journal for the acupuncture and Chinese medicine profession. All articles, other than Current Research and Clinical Applications, Research Snapshots, Book Reviews, Conference Reports, Standards and Guidelines, and National and International News, have undergone the peer-review process. AJACM is indexed in the Australasian Medical Index.

Publication, design and printing
Published by the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA)
ABN 52 010 020 390

Design by Blink Studio
Printed by Screen Offset Printing

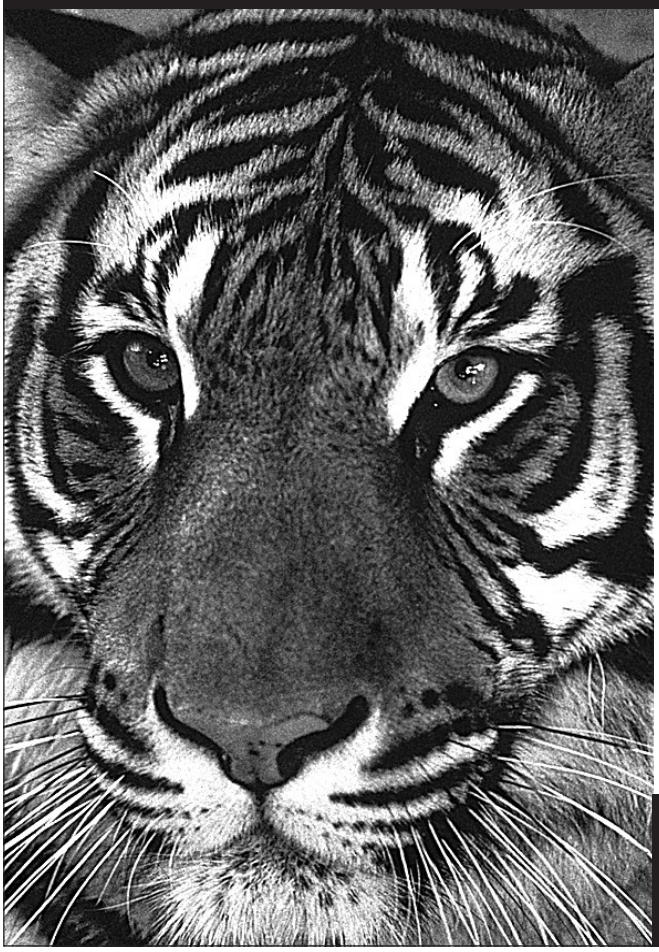
Contact information
AJACM
PO Box 1635
COORPAROO DC QLD 4151
AUSTRALIA

Phone: + 61 7 3324 2599
Fax: + 61 7 3394 2399
E-mail: ajacm@acupuncture.org.au
Web: www.acupuncture.org.au/ajacm.cfm

For information regarding subscriptions and advertising, please see end pages.

ISSN 1833-9735

Are you trading legally?



If you are importing or selling complementary medicines, please ensure you have met the requirements set by the Department of the Environment, Water, Heritage and the Arts (DEWHA) and the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES).

Australian Government

Department of the Environment, Water, Heritage and the Arts

hmaC092669

For further information, contact DEWHA on **02 6274 1900** or visit **www.environment.gov.au/biodiversity/travel**

Editorial

The *Australian Journal of Acupuncture and Chinese Medicine* (AJACM) is now in its third year of publication, a crucial year for any new journal. To further understand what our readers want from AJACM, we conducted a survey during the 2008 AACMA annual conference. The results of the survey and other issues that we want to communicate with our readers are in a short article, 'A Journal in the Making', included in this issue. We are delighted with the enthusiasm expressed by our readers, and are grateful for the constructive comments. For those who plan to contribute to us and want to know the types of research that our practitioner members need, please do not miss the article.

The quality of a journal is closely linked to the expertise and efforts of peer reviewers. We thank those who have assessed manuscripts for us in the past three years. A list of reviewers is provided in this issue.

Qualitative research methods, in contrast to quantitative research methods, have been increasingly used in Chinese medicine research. Such studies are more concerned with the experience and thoughts of the participants, rather than the data of pre-defined outcome measures. They help identify those elements that have not been explored before. 'Acupuncture in Drug and Alcohol Withdrawal at the Community Residential Withdrawal Unit, Footscray Hospital, Melbourne' is an example of such a study. I am sure that most of our clinician readers will appreciate this paper. It also provides an example of how acupuncture can be integrated into a multidisciplinary health service.

'Shenzhi Theory: A Clinical Model of the Mind and Mental Illness in Chinese Medicine' discusses the 'body-mind' concept that is critical to Chinese medicine, yet has not been properly explained in any major textbooks. The authors of this paper not only explain the historical concepts but also discuss the Chinese herbal medicine treatment in this area.

A third paper is about Chinese medicine education. It introduces a user-friendly research method in gathering feedback from students so as to improve course experience. Educators might find this method particularly useful.

Also included in this issue is the first manuscript submitted to us by a student of Chinese medicine. Apart from the main theme of a patient with chronic constipation, the authors clearly document the clinical reasoning process and the method to deal with conflicting information. Controversial signs and symptoms are not uncommon in clinical practice: how to analyse and use them often baffles our students and new graduates. This case report provides a good example for how such problems can be resolved.

Continuing with our theme on Chinese medicine in other countries, we publish a narrative review entitled 'Progress in Clinical Studies on Acupuncture Therapy in China: A Summary of Research in the Last Ten Years'. Our clinicians will find that this report brings some new knowledge into their practice.

With an increased use of acupuncture for in-vitro fertilisation (IVF), a number of clinical trials and systematic reviews have been published. The conclusions are, however, conflicting. A short paper on this issue provides a concise summary and helps readers understand the conflicting information. This article will be particularly useful when our readers discuss the role of acupuncture in treating infertility with their patients.

Starting from the last issue, we have introduced a section called Research Snapshots so that our readers are updated on the latest findings in Chinese medicine. Readers have found them particularly useful. We will continue to have this section in the current and future issues. Other features in this issue are book reviews and abstracts for the 2008 AACMA Research Grant winners to keep you up to date on these matters.

2008 has been a busy and prosperous year for Chinese medicine in Australia. In May, the book *WHO Standard Acupuncture Point Locations in the Western Pacific Region* was jointly launched in Sydney by Dr Seung-Hoon Choi, the Regional Advisor in Traditional Medicine, World Health Organization (WHO) Western Pacific Regional Office; the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA); and the RMIT University WHO Collaborating Centre for Traditional Medicine. This book is the product of more than five years work by Dr Choi's Office. You can read more about the book in the review by our Deputy Editor, Dr Chris Zaslawski.

In October 2008, the National Health and Medical Research Council (NHMRC) announced the successful applicants for the 2009 grants. NHMRC grants are the most competitive medical research funds in Australia. Acupuncture clinical research has received the strongest support this year since the commencement of the council. Four grants went to RMIT University for acupuncture research on acute pain, chronic pain and allergic rhinitis. One grant went to Griffith University for acupuncture clinical and experimental research on immunity. Another grant was given to researchers at the University of Melbourne to study laser acupuncture on osteoarthritis of the knee. Five of the six funded projects were received by applicants associated with AACMA and AJACM; they are Prof Charlie Xue, Dr Zhen Zheng, Prof Marc Cohen, A/Prof Caroline Smith and Mr John McDonald. Congratulations to them all. We look forward to learning their research outcomes in three to four years.

Our members will be very pleased to know that three of the six funded acupuncture projects were built on pilot studies that were partially supported by AACMA research grants. This shows how a small amount of funding can help realise a bigger dream.

The 2009 NHMRC results have reaffirmed the direction that this profession is taking and needs to continue to take in relation to research. It is our aim that this journal will play an indispensable role in this journey.

Zhen Zheng
Editor-in-Chief

A Journal in the Making: Perspectives from the Editorial Board and Our Readers

It has been three years since the first issue of the *Australian Journal of Acupuncture and Chinese Medicine* (AJACM) was published in November 2006. For the future growth of the publication, we need to regularly reflect on how we perform.

In the following section, we will briefly summarise the situation of AJACM internationally, how we performed in the last three years and what you have thought about the journal.

How are we situated internationally?

There are eight international journals in the area of acupuncture or Chinese medicine listed in PubMed, the most comprehensive database of medical literature in the world. All of them are published in the northern hemisphere. Six of them are published in English and two are in Chinese.

Eleven journals internationally are for complementary or integrative medicine. Except for one published in Singapore, all of them are published in the northern hemisphere.

AJACM appears to be the only peer-reviewed Chinese medicine journal in the southern hemisphere.

How did we perform?

Up to July 2008, AJACM has an acceptance rate of 28%, which is comparable to other peer-reviewed journals.

All manuscripts are reviewed by one internal and two external reviewers. The average time from acceptance to publication is about two to three months. More than 90% of the peer reviewed manuscripts were unsolicited.

Up to July 2008, we have published eight review papers, seven original research papers, three case reports and two commentaries. We have also published non–peer-reviewed articles, including current research summaries, book reviews, professional news and conference reports. From time to time, we reprint important papers to raise the awareness of these papers by our readers.

As you all know, this journal is indexed with the Australasian Medical Index. To allow more people to access the papers published in our journal, this year we requested that AJACM be indexed in PubMed. As part of the approval process, the US National Library of Medicine, the administrator of PubMed, will track our performance for three years.

The quality of a journal is judged by a government-appointed agent in Australia and by impact factor (IF) internationally. In July this year, the Australian Government appointed the Australian Research Council to conduct a trial to invite all academics in this country to rank journals in their relevant fields. This exercise will determine the quality of each journal, particularly those published in Australia. I understand four universities that teach Chinese medicine have made a submission in support of the up-ranking of AJACM because of its high quality and its impact in this country. We thank them for their support.

'Impact factor' refers to the ratio of the number of times papers are cited, over the number of papers published in a journal across two years. Obviously, a higher IF indicates a higher citation rate and reflects the importance of a journal. Journals with a higher IF are generally of better quality. For instance, in 2006 the *New England Journal of Medicine* had an IF at 51.296, the *Medical Journal of Australia* at 2.582, the *American Journal of Chinese Medicine* at 0.742. To gain any IF, a journal must be first included in a major database, such as PubMed.

We are certain that AJACM will gain an impact factor if we maintain our current standards.

What do you think about the journal?

To understand the needs of our readers, mainly members of the Australian Acupuncture and Chinese Medicine Association, we conducted a survey at AACMAC 2008 in Sydney. In the survey we asked a series of questions aiming to discover if our members read the journal; if you found the articles interesting and useful; and the types of papers you would like to read.

The results were very encouraging. Forty-two delegates completed the survey. Over 90% of the respondents said that they read the journal, and nearly 70% read the whole journal. Some said, 'I read it again, and again, and again', or 'Nothing will stop me from reading the AJACM'.

According to feedback, the most frequently read papers are:
- those about clinical experience
- case reports
- current research and clinical applications section
- reports of clinical trials
- theoretical or discussion papers.

Other types of papers that you would like to read and we will consider publishing in the future are:
- interviews with experienced clinicians
- discussion of clinical issues
- reviews of the management of clinical conditions
- research snapshots
- translations of classical literature
- integration of different modalities and therapies
- philosophical discussion
- educational papers to help understand and interpret research terminologies, papers and statistics.

You also wrote down a long list of other types of papers you wanted to read, including those about:
- the integration of TCM practitioners into multidisciplinary teams
- new technologies and discoveries in TCM
- new formulae or new herbs
- psychological factors of disease states
- international developments
- research that is particularly relevant to clinical practice, not just to convince Western medical doctors that TCM works
- political/professional discussion about the TCM profession, such as registration, views from the biomedical establishment, the debate within TCM of being more 'scientific' or not
- reports of how TCM is situated in countries that practise it, from Korea to southeast Asia
- communication of TCM to the wider public/patients
- articles relevant to students in particular.

As you can see, some of your requests have been addressed in the current issue. We will ensure most of them will be addressed in future issues. We thank you for telling us what you want. Your requests will initiate many research projects.

The most common reason for not reading the journal is being too busy. Others think the research papers are not related to clinical practice.

Myths

There are some myths about the subscription and submission of a manuscript.

MYTH 1: Some students or new graduates would like to read the journal, but said they could not afford the subscription fee.

Student members of AACMA receive AJACM as part of their membership. Students who are studying Chinese medicine at an Australian university or private college can apply to become a student member of AACMA free of charge. Overseas students pay an annual fee for student membership. Once they graduate, the application fee for full membership is waived for student members. New graduates also enjoy a significantly reduced membership fee in their first year if they apply for accredited membership within nine months of the end of the semester

of course completion. Contact the AACMA office for further information on membership options.

MYTH 2: To have an article accepted by AJACM is difficult; a long, drawn-out affair. It looks like this journal will only accept papers from PhD lecturers from Australian universities. It's not a bad thing: it promotes professionalism and impresses the scientific community.

AJACM is a peer-reviewed journal. We have to meet international standards to ensure the quality of every paper published. Furthermore, we aim to have this journal included in the PubMed database so that people around the world will have access to our papers. We thank this reader for understanding and appreciating these standards.

However, you do not have to have a PhD to publish your work with us. As you can see from the papers published in this issue, some of the authors do not have a PhD and one author is an undergraduate student. Everyone can and is welcome to submit manuscripts to us. As long as the quality and contents meet our standards, the manuscripts will be accepted and published.

Together we grow

One reader said, 'It seems that our profession is moving away from the whole and to some extent being caught up in research. However necessary, we must maintain the heaven, man and earth connection.' This question goes to the heart of the future direction of Chinese medicine, and is big enough to make five PhD theses. Discussion on the direction of TCM is beyond the scope of this editorial, but we would like to briefly mention what research is and offer some suggestions.

The *Oxford English Dictionary* defines research as 'the systematic study of materials and sources in order to establish facts and reach new conclusions'. Simply, to research is to investigate, to find new facts, and to have new solutions or conclusions. It is not foreign to Chinese medicine. Li Shi Zhen tasted hundreds of herbs in order to understand the property of each herb. This is research. Li Dong Yuan advocated Spleen and Stomach Theory after studying with Zhang Yuan Su, identifying the causes of internal disease and utilising the treatment strategies of regulating Spleen and Stomach successfully. This too is research. It is through research that many of our forebears advanced Chinese medicine theory and practice. Research has many methods and dimensions. Some clinical research can be carried out by our practitioner members.

How Chinese medicine is developed and advanced in this country is not up to a small number of lecturers in universities – it is up to our practitioners. Most of our readers have been in practice for many years, and have a wealth of knowledge. Some of the requests from our readers, listed above, can easily be answered by and will resonate with other readers.

We invite our practitioner members to work together and to document their experiences and cases. When you are ready, you know where to submit your manuscripts. Together we grow and become better.

Zhen Zheng
Editor-in-Chief

Corrigenda

In the Research Snapshots of the previous issue (volume 3, issue 1, 2008), the names of several Chinese medicinal herbs were mispelled. The corrected spellings are listed in the following table.

Corrigenda

Page number	Printed version	Correction
Page 59, column 1	*Jingyinghua*	*Jinyinhua*
Page 59, column 2	*Gegan*	*Gegen*
	Xinren	*Xingren*
	Jingyinhua	*Jinyinhua*
	Chuangxinlian	*Chuanxinlian*
Page 59, column 3	*Tianhuafeng*	*Tianhuafen*

Acupuncture in Drug and Alcohol Withdrawal at the Community Residential Withdrawal Unit, Footscray Hospital, Melbourne

Damien Ryan* PhD
Health and Community Services, TAFE NSW Riverina Institute, Albury, Australia

Michael McDonough MBBS
Drug and Alcohol Services, Western Health, Melbourne, Australia

Cally Berryman PhD
School of Nursing and Midwifery, Victoria University, Melbourne, Australia

Dimce Kotevski RN
Community Residential Withdrawal Unit, Western Health, Melbourne, Australia

Kayte Jenkin
School of Biomedical Sciences, Victoria University, Melbourne, Australia

ABSTRACT

Background: Acupuncture has been offered as an adjunct therapy in drug and alcohol withdrawal at the Community Residential Withdrawal Unit (CRWU), Western Hospital, Footscray, since 1996. Anecdotal reports from staff and clients indicate that acupuncture is a useful treatment approach, and, to investigate more thoroughly, a collaborative study was undertaken in 2007. Aims: To identify and explore client and staff perceptions of the benefits/limitations of acupuncture in the CRWU program. Design: Semi-structured interviews were used to capture data that would provide understanding of client and staff experiences of acupuncture. The data were analysed qualitatively to identify major themes. Participant selection criteria: Consenting in-patient clients at CRWU aged 18 years or over who had acupuncture during the period of the study, plus all clinical staff at CRWU who consented to participate in the study. Data analysis: Client and staff interview data were analysed using thematic content analysis to identify major themes and insights that related to the aims of the study. A comparative analysis of client and staff views, based on the two sets of data, was also undertaken to explore convergences and divergences of views. Results: The study found that there was a strong consensus amongst clients and staff interviewed that acupuncture was a beneficial therapy that had a relaxing effect with various 'flow-on' benefits such as decrease in anxiety and reduction of pain. Conclusion: Drug and alcohol treatment guidelines support the view that matching treatment approaches to individuals is critical to the success of returning clients to the community. It is also acknowledged that a combination of treatment regimes is a best-practice approach. This study reveals that staff and clients at CRWU believe that acupuncture is a beneficial non-pharmacotherapeutic approach in the treatment of drug and alcohol dependency.

KEYWORDS acupuncture, drug and alcohol, detox, withdrawal.

* Correspondent author; e-mail: Damien.Ryan2@tafensw.edu.au

Aust J Acupunct Chin Med 2008;3(2):5–12.

Introduction

BACKGROUND

Drug and alcohol misuse is a major health problem with physiological, psychological, and social detriments that place enormous demands on national health expenditure. Collins and Lapsley[1] estimated that the direct and associated costs from drug misuse in Australia were over A$6 billion. A report on substance misuse in the City of Maribyrnong, Victoria, noted that misuse in the municipality was relatively high, with approximately 50% of those with substance misuse issues being Caucasian and the other half coming from diverse cultural and linguistic backgrounds.[2]

One of the major drug withdrawal centres in the Maribyrnong municipality is the Community Residential Withdrawal Unit (CRWU) at the Western Hospital, Footscray, which offers both in-patient and outpatient programs. The in-patient program provides clients with the option of acupuncture to assist with the critical phase of withdrawal from drug and/or alcohol dependence. Since 1996, Victoria University has been involved with the CRWU program providing acupuncture to assist clients in drug and alcohol withdrawal.

Participants in the CRWU program undergo an intensive one-week residential program that incorporates psychotherapeutic therapies and medical interventions. Residents are adults of various ages and backgrounds, with various drugs of dependence. Tables 1 to 7 (page 10) provide a snapshot of the diversity of clients who agreed to participate in this study.

The use of acupuncture in the treatment of drug withdrawal developed in Hong Kong in the 1970s and subsequently at the Lincoln Hospital (New York) with the creation of the National Acupuncture Detoxification Association (NADA) protocol. The NADA protocol, used extensively in the United States, employs a set formula of auricular acupuncture points during withdrawal and post-withdrawal from drug and alcohol dependency. In addition to the NADA protocol, many acupuncturists in Australia administer individualised client treatments for managing drug withdrawal symptoms since they contend that acupuncture treatments tailored to client-specific needs are more efficacious.

In the CRWU program acupuncture is offered free to clients. Final-year acupuncture students at Victoria University, under the supervision of a qualified practitioner registered with the Chinese Medicine Registration Board of Victoria, conduct the treatments. Client participation is on a completely voluntary basis and treatments are individualised to patient presentations utilising both body and ear acupoints.

Anecdotal reports from staff and clients at CRWU indicate that acupuncture is a useful treatment approach for assisting in the management of withdrawal. To investigate more thoroughly the apparent benefits and/or limitations of acupuncture as an adjunct therapy in the CRWU program a joint study was undertaken in 2007.

RESEARCH PURPOSE

A study was undertaken at CRWU to identify and explore both client and staff perceptions of the benefits/limitations of the existing acupuncture program in drug and alcohol withdrawal. Qualitative data were gathered from clients and staff in order to capture participant perceptions of acupuncture as an adjunct therapy in drug and alcohol withdrawal.

The study employed semi-structured interviews to capture, analyse and understand client and staff experiences concerning the benefits/limitations of acupuncture as an adjunct therapy in detox. The interview data were analysed qualitatively to identify major themes. The respective analyses from the client and staff data were compared to identify points of agreement as well as any disjunctions.

This study was undertaken under conditions of voluntary informed consent, with ethical approval from Victoria University Human Research Ethics Committee and the Melbourne Health Human Research Ethics Committee on behalf of the Western Hospital, Footscray.

AIMS

- To identify and explore client and staff perceptions of the benefits/limitations of acupuncture in drug and alcohol withdrawal;
- To compare and analyse the main areas of agreement and/or disagreement between client and staff perceptions of acupuncture in the CRWU program;
- To inform policy and practice in the domain of drug and alcohol withdrawal.

SIGNIFICANCE

- Drug and alcohol abuse is a serious health issue, and drug-free, cost-effective treatment approaches are of interest to clients, health professionals and government.
- The study provides an understanding of the perceived benefits/limitations of acupuncture as an adjunct treatment in drug and alcohol withdrawal.

Methodology

INTERVIEWS

In this study clients were approached by research staff (independent of clinical services) to participate in an interview. Using a semi-structured approach the interviews explored client

perceptions of acupuncture whilst undergoing detoxification and experiencing symptoms of withdrawal. Interviews were conducted with clients and staff until a point of 'data saturation' was reached. In all, 14 clients and 15 staff were interviewed. The interviews were audio-taped and later transcribed for analysis. Each interview lasted 20 to 30 minutes and at the point of interview transcription any identifying information was removed.

PARTICIPANT INCLUSION CRITERIA

CLIENTS:

- Participant inclusion criteria: Consenting in-patient clients at CRWU aged 18 years or over who had acupuncture during the period of the study.
- Participant exclusion criteria: Clients of the outpatient program at the Western Hospital or clients who were unable to give informed consent due to significant medical or psychiatric morbidity (e.g. severe depression, psychosis, delirium).

STAFF:

- Participant inclusion criteria: All clinical staff at CRWU who consented to participate in the study.
- Participant exclusion criteria: Administrative and other non-clinical staff at CRWU.

PROCEDURE

All clients and staff at CRWU were provided a plain-language information sheet and verbal explanation about the study, and invited to participate. Participation was on a completely voluntary basis and signed consent was gained before any participant engaged in any aspect of the study. Client interviews were conducted on a day after acupuncture treatment. Staff interviews were conducted at mutually agreeable times.

DATA ANALYSIS

Qualitative client and staff interview data were analysed using thematic content analysis to identify major themes and insights that related to the aims of the study. A comparative analysis of client and staff views, based on the two sets of data, was also undertaken to explore convergences and divergences of views about the use of acupuncture in drug and alcohol withdrawal.

DEMOGRAPHIC PROFILE OF PARTICIPANTS

Of the fourteen clients interviewed, nine were male and five were female (Table 1). All but two of the participants were born in Australia (Table 2), and the mean age of participants was 36.2 years (Table 3). Two participants had undertaken tertiary studies, five had completed year 9 as their highest level of schooling and the remainder were in between these parameters (Table 4). In terms of 'drug of choice', alcohol was preferred by eleven of the fourteen participants (Table 6). Other drugs such as cannabis, cocaine, ecstasy, heroin and speed were also taken by participants (Table 7), indicating that multiple drug use was common amongst this group of participants in the detox program at CRWU.

Findings

CLIENT INTERVIEW DATA

CLIENT REASONS FOR HAVING ACUPUNCTURE

Of the clients who were interviewed, nine out of the total fourteen participants stated that they had had acupuncture treatment previous to the recent session at CRWU (Table 8). It appeared that prior positive experience was a major motivating factor for clients' agreeing to undertake acupuncture to assist with drug/alcohol withdrawal.

> I had it done once before and it really relaxed me, and um I actually haven't been sleeping, and um it put me to sleep. Yeah, so I find it really good. Really relaxing. (K7 p.2)

> I had it [acupuncture] once before when I was in here last year. . . . I had it [again] to just feel more relaxed. . . . Yeah. (K25 p.1/2)

Other clients who had not previously had acupuncture and chose to have it as part of their withdrawal program, did so on the basis of positive beliefs about its benefits and/or an attitude of 'give it a go'.

> I have a friend who has a really bad liver and she has it [acupuncture] once a week. Western Medicine can't help her anymore. And umm, she swears by it [acupuncture]. (K1 p.4)

> I've always wanted to try it, but I have never really had the opportunity. I guess I've never had an illness that I felt I needed to go and do that [acupuncture]. . . . I've not been exposed to it . . . but I'm really open-minded and wanted to try it. (K10 p.2)

> Basically just to see what it was all about, you know. Just to have a go, see if it [acupuncture] would help. (K4 p.2)

CLIENTS' VIEWS CONCERNING THE MAIN BENEFITS OF THE ACUPUNCTURE TREATMENT

Clients were also asked to comment upon any specific benefits (e.g. physiological, psychological, emotional) they believed resulted from acupuncture. They were asked whether or not acupuncture assisted in relieving the symptoms associated with drug/alcohol dependency and withdrawal. A thematic analysis of the client interview data revealed that the most commonly reported benefits were decreased anxiety, decreased level of pain, and increased sense of relaxation.

DECREASED ANXIETY

Interviewer: Are you still getting night sweats?

Client: Yes. Nah it [acupuncture] didn't help.

Interviewer: And anxiety level?

Client: Actually, I think that it has actually helped that. 'Cos this morning at the meeting, like usually I'm a pretty quiet bloke, I was saying my bit . . . I was saying eh . . . like you know . . . which I thought was a bit different. A bit weird for me.

So Yeah! I do think it helped in that way . . . . . I just, I just find it hard to speak. 'Cos I'm on marijuana . . . It's always 'Am I saying the right thing'? (K24 p.2/3)

It [acupuncture] cleared my mind because you're relaxing. And you know everything's gone from your head. So it's good. It made the mind go blank. (K7 p.2)

Interviewer: So it [acupuncture] helped with anxiety and stress?

Client: Yep. Most definitely. That's why I done it because I suffer from anxiety and it [acupuncture] was good. (K7 p.2)

DECREASED LEVEL OF PAIN

It [acupuncture] has eased the pain and bad back. But most of all I think it has improved my asthma. I pulled a muscle in my back and it was quite sore for a while. It [acupuncture] helped. (K27/28 p.2)

It was really relaxing. And um this morning I haven't got that back pain that I usually have. . . . It feels like it is cured, but I doubt if it is. It's just for the time being. (K7 p.4)

There's a lot of stress on my back and neck, 'cos I was doing truck driving. And there are certain parts of the trailer that are hard to get to. . . . So I just thought I'd try something [acupuncture] . . . and the muscles actually feel better today, a little bit softer. (K4 p.2)

INCREASED SENSE OF RELAXATION

Afterwards [after the acupuncture] I felt a lot more calm. A lot more relaxed and sleepy. I nearly fell asleep on the table. (K3 p.2)

Interviewer: What did you feel like when you were having acupuncture?

Client: It's hard to explain. It just relaxed me. (K7 p.3)

I felt sort of relaxed when I came out [from acupuncture]. And yeah I felt that way for a few hours. (K25 p.3)

It makes you feel more relaxed . . . More than that I suppose, I don't get as upset or anything. (K26 p.3)

OTHER BENEFITS

Some clients also reported that the acupuncture assisted in improving sleep and decreasing headaches.

Interviewer: So do you think acupuncture helped you?

Client: Definitely, because it subsided my headache. I didn't have a headache afterwards. (K8 p.3)

I slept pretty good last night [after the acupuncture]. Usually I wake up every hour or every couple of hours, tossing and turning. I only woke up once last night and that was from the sweats, so I took off my top and went back to sleep and slept in a bit. Usually I get up about eight o'clock. I slept in till a quarter to nine. (K9 p.4)

STAFF INTERVIEW DATA

All of the drug and alcohol workers at the Community Residential Withdrawal Unit were approached to participate in an interview to ascertain their observations and views concerning the benefits/detriments of acupuncture as part of the withdrawal program at CRWU. Fifteen staff, out of a total of 24 permanent staff at CRWU, agreed to participate in an interview.

STAFF PERCEPTIONS OF WHY CLIENTS DO OR DON'T HAVE ACUPUNCTURE

Staff concurred with the clients' views about the reasons for having acupuncture, naming previous positive experience, positive beliefs about acupuncture and a willingness to 'give it a go' as key motivating factors.

Some do it [receive acupuncture] because they have had it before. Some do it because they get good feedback from other people that it can relax them. (K17 p.1)

Although acupuncture may not seem to be a mainstream thing, I think a lot of our client group are interested in exploring alternative things. (K16 p.1)

I think some have never had acupuncture before and they are willing to give it a go to see if . . . You know they have heard about it, or enough about it, so they are willing to give it a go to see if it does help them, and if they get benefits from it. (K22 p.1)

STAFF VIEWS CONCERNING THE MAIN BENEFITS OF THE ACUPUNCTURE TREATMENT

Staff were also asked to comment upon any specific benefits (e.g. physiological, psychological, emotional) they believed resulted from acupuncture. They were asked their views on whether or not acupuncture assisted in relieving the symptoms associated with drug/alcohol dependency and withdrawal. A thematic analysis of staff interview data revealed that the most commonly reported benefits were decreased anxiety, increased

relaxation, and improved environment in the CRWU residential treatment unit. Some staff also believed that acupuncture assisted clients in reducing headaches, decreasing cravings and improving sleep. A few staff also commented that by reducing stress and increasing relaxation, acupuncture had a broad effect on a range of symptoms.

DECREASED ANXIETY

> It helps them with their anxiety. They seem a lot calmer afterwards. (K6 p.2)

> Very calming. It often helps with the ongoing effects of anxiety and depression. (K23 p.4)

> I think it [acupuncture] releases a lot of energy. You know, anxiety and the things that are trapped inside the clients' bodies. They kind of feel a lot more relaxed afterwards and it releases a lot of things for them . . . endorphins, emotions, that kind of stuff. (K16 p.1)

> I just think that people tend to be a bit more centred [after acupuncture]. . . . I guess their presentation is a lot more . . . ah rather than being heightened in terms of their emotional responses, they are quite calm. (K20/21 p.4)

INCREASED RELAXATION

> Relaxation is the main one. A lot of them [clients] say they have fallen asleep during treatment. (K20/21 p.2)

> I think the majority of them feel a sense of feeling more relaxed, calmer after treatment. (K19 p.1)

> I'd say to them [clients] 'How did it go?' and they will say 'yeah, I feel really good'. I can always see that look on their faces. They just look so relaxed afterwards. (K6 p.4)

> I suppose it's that sense of relaxation euphoria that works on the . . . I guess the way it works on endorphins relaxes the body and mind accordingly. (K14 p.3)

IMPROVED ENVIRONMENT IN THE CRWU RESIDENTIAL TREATMENT UNIT

> They [clients] are certainly more settled. They are also more open [after acupuncture]. They are happy to talk, but in a more settled, not chaotic or emotionally distressed way. There is a bit more balance happening, so you [staff] tend to do a bit better work. (K22 p.1)

> At the time [of treatment] people feel extremely relaxed. Often it does free up emotions and things do manifest themselves in the next 24 hours. . . . They either wish to discuss or they become teary or whatever. . . . That's part of their healing, which is really great. (K16 P.2)

> There is none of that level of tension in the unit. When they have had acupuncture, that level of tension and hanging out and talk, settles. (K22 p.3)

> That's the main thing I notice about it [acupuncture]. They [clients] are more relaxed and not demanding medication so early in the shift, or so frequently. (K17 p.2)

> I find personally, it [acupuncture] is something you can try to manage their [clients] pain rather than popping pills or taking drugs. (K18 p.2)

OTHER PHYSIOLOGICAL BENEFITS

Some staff also believed that acupuncture assisted clients in reducing headaches, decreasing cravings and improving sleep.

> Muscle tension . . . cramps . . . gastrointestinal disturbances. Some clients said that it really settled these. The headaches and that sort of stuff, it has really settled a lot of those. And they just generally feel better, more relaxed. (K22 p.2)

> Well certainly on that particular day, it [acupuncture] helps them with their cravings because they are more relaxed. (K17 p.3)

> Some of their other aches and pains and things like that, they benefit from [acupuncture treatment]. Even sleep. They feel like they have had a really good sleep. (K6 p.2)

ACUPUNCTURE HAS A BROAD SPECTRUM EFFECT

Some staff commented that acupuncture had a broad spectrum effect. For example, by helping clients relax it also decreases cravings, headaches and assists with sleep.

> They're more relaxed when they come out of the acupuncture. I think that covers all of those things. When they feel more relaxed, their headaches and pains seem to go, they're more relaxed and they are not craving as much. When they are relaxed, they're sleeping better at night. (K5 p.3)

> The hyperactive ones [clients] do tend to be a bit more relaxed [after acupuncture]. . . . I think it improves their sleep as well . . . And most of it [our observations] is just from verbal reports of 'yeah that was great'; 'I really enjoyed that'; 'I'm looking forward to it next week'; 'I feel relaxed after it' or 'I feel a lot more energetic'. (K12 p.3)

> They [clients] fell asleep . . . felt more relaxed . . . a bit of pain relief . . . and they just felt okay. (P19 p.2)

ACUPUNCTURE TREATMENTS NEED TO BE MORE AVAILABLE TO DETOX CLIENTS

Staff also commented that acupuncture should be offered more than once a week at CRWU, so that clients could get the full

TABLE 1 Gender	
Male	9
Female	5

TABLE 2 Country of birth	
Australia	12
Other*	2

* Other countries were Greece and UK.

TABLE 3 Age group				
18–29	30–39	40–49	50–59	60+
5	3	5	1	–
Mean: 36.2 years			SD: 9.11 years	

TABLE 4 Education				
Yr 9 or below	Yr 10	Yr 11	Yr 12	Tertiary
5	5	1	1	2

TABLE 5 Accommodation					
Rented	Private	Boarding House	Hostel	Homeless	Other
3	8	1	1	–	1

TABLE 6 Primary drug of choice						
Alcohol	Cannabis	Cocaine	Ecstasy	Heroln	Speed	Other
11	1	–	–	2	–	–

TABLE 7 Other drugs used in the past months						
Alcohol	Cannabis	Cocaine	Ecstasy	Heroln	Speed	Other*
–	5	2	1	1	3	3

* Other drugs included Benzodiazepines.

TABLE 8 Previous acupuncture treatment	
Yes, client has had acupuncture before	9
No, client has not had acupuncture before	5

benefit from the treatment. Additionally, it was also suggested that clients should follow-up with subsequent acupuncture treatments when they leave the unit.

> Personally, I don't think once a week is enough. Maybe like every four days. Like you should do with massage. (K11 p.3)

> Well I think it [acupuncture] is really good. I think it's yeah . . . a really good program. I'd like to see clients following up with it more . . . You know, I would really like to see them follow it up and get regular treatment. (K19 p.5)

In supporting the view for more regular treatments, some staff commented that at the Windana Drug and Alcohol Withdrawal Centre in Melbourne, acupuncture was offered daily.

> Where I work at Windana, we do it [acupuncture] every morning for an hour in the NADA [acupuncture] protocol in everyone's ears and it puts them [clients] in a completely relaxed state for the whole day. (K16 p.5)

Overall, staff comments indicated a substantial level of support for the use of acupuncture in the detox program at CRWU. Specific therapeutic benefits were suggested and there was a general view that it would be beneficial to offer acupuncture to clients on a more regular basis.

Results

The study found that clients chose to have acupuncture as part of their treatment either because they had had previous positive benefits from acupuncture or they had positive beliefs in its benefits. Additionally, clients and staff expressed the view that acupuncture treatment was worth 'giving it a go'.

With respect to the benefits or not of acupuncture in the detox program at CRWU, the thematic analysis of interview data showed that there was a high level of agreement between clients and staff on the issues discussed. In particular, there was considerable agreement that acupuncture produces a heightened level of relaxation. There were, however, differences of opinion concerning the accompanying physiological benefits and symptomatic relief that accompanied treatment.

Suggested benefits included decreased anxiety, improved sleep, reduced pain and reduced headaches. A significant number of both clients and staff believed that there was a close relationship between an increase in relaxation levels and decrease in anxiety/stress levels as a result of acupuncture treatment. Some studies have reported that acupuncture positively influences the relaxation-anxiety cycle; it was a noted outcome in studies by Yano et al.,[3] Scott and Scott[4] and Anderson and Lundeberg.[5] Moreover, this view is widely supported by anecdotal comments of acupuncture clinicians and clients.

In the CRWU study there was strong consensus about acupuncture's effect of increasing relaxation and reducing anxiety levels. There was no strong consensus about acupuncture's specific effects upon physiological symptoms commonly found during addiction and withdrawal. These findings concur with those of Sapir-Weise et al.[6] In a randomised single-blind controlled trial of acupuncture in withdrawal from alcohol dependence (total $n = 72$), they found that while acupuncture had no apparent effect upon craving, the reduction in anxiety was statistically significant in the treatment group.

Changes in anxiety levels were also noted as significant in Berry's clinical study of acupuncture as an adjunct treatment in drug and alcohol withdrawal,[7] Bernstein's study of patient's experiences of acupuncture in withdrawal,[8] and Bannister's qualitative study conducted at the Windana Drug Withdrawal Service, Melbourne.[9]

The clinical use of acupuncture in drug and alcohol withdrawal is supported by research into its neurological and physiological effects. It has been shown that by producing rhythmic discharges in nerve fibres and releasing beta-endorphins, acupuncture reduces pain and decreases stress level markers.[3,5] By altering dopaminergic and serotonergic systems in a way that correlates with anti-stress markers,[3] it is arguable that, in addition to pain relief, acupuncture has a broader effect on general well-being. Scott and Scott[4] suggest that by increasing the amount of serotonin in the hypothalamus, acupuncture minimises cravings and associated symptoms that occur during the drug withdrawal phase.

In the CRWU study some staff also suggested that acupuncture should be more available to clients, whether in-patients or outpatients, to assist in the treatment of drug and alcohol dependency. This view is synergistic with current best-practice drug and alcohol treatment guidelines.

The 2007 NSW drug and alcohol treatment guidelines[10] state that no single treatment is appropriate for all individuals and that matching treatment to individuals is critical to treatment success. Multi-faceted treatments should be available as an individual may require a combination of services such as counselling, medication and other services.

Arguably, treatment-matching using non-pharmacotherapeutic regimes facilitates more effective treatment delivery and can improve the effectiveness of treatment. Moreover, people with problematic drug and alcohol use are often reluctant to access mainstream primary health care[2] and waiting lists for existing services in detoxification places are sometimes long and difficult to access.

The results of the CRWU study show that acupuncture can be a useful non-pharmacotherapeutic treatment regime in drug

Clinical Commentary

Drug and alcohol misuse is a widespread and major health issue in Australia and as such many practitioners of Chinese medicine treat this condition and/or the side effects associated with drug and alcohol misuse. The NADA protocol, individualised acupuncture treatments and herbal medicines are interventions applied with varying degrees of success in treating this multifaceted physiological/psychological/psycho-social condition. This study, undertaken in a hospital unit that has a long history of acupuncture usage in withdrawal, provides insights into what staff and patients believe to be the main benefits of acupuncture as an adjunctive treatment regime. The perceived benefits identified in this study provide TCM practitioners with clinical insights into areas where symptomatic changes are likely to occur when assessing patient treatment progress. In addition, by adding to the body of evidence, this study is also of benefit to practitioners who work in the field of drug and alcohol withdrawal and need to provide relevant data to government and private services.

and alcohol detoxification. Arguably acupuncture would be beneficial in outpatient as well as in-patient treatment regimes and would provide a greater choice for those with problematic drug and alcohol use.

Conclusion

This study collected and analysed qualitative data in order to identify client and staff perceptions of the use of acupuncture in drug and alcohol withdrawal at the Community Residential Withdrawal Unit (CRWU), Western Hospital, Footscray. Participants commented that many or most of the clients at CRWU chose acupuncture as part of the broad range of therapies available within the unit's treatment regime. The main stated reasons for having acupuncture were previous positive experience and/or positive beliefs about the benefits of acupuncture.

The research showed that there was a strong consensus amongst participants in the study that acupuncture was a beneficial therapy in the detox program at the CRWU. Staff and clients believed that acupuncture had a relaxing effect and this produced various 'flow on' benefits such as decreased anxiety, reduction in pain and headaches, and improved sleep. Some staff also commented that the relaxing effect centred the clients and made them more receptive to other therapies in the program. There were no reported negative aspects to including acupuncture in the range of treatment options at the CRWU.

In Australia, drug and alcohol treatment guidelines state that matching treatment approaches to individuals is critical to the success of returning clients to the community. It is also acknowledged that a combination of treatment regimes is a best-practice approach.

This study showed that acupuncture is a viable non-pharmacotherapeutic treatment regime in the treatment of drug and alcohol dependency. In comparison to other therapeutic interventions, acupuncture is a low-cost therapy that is easy to offer in a range of venues and, in view of the positive outcomes of this research, warrants consideration at both the health policy and service delivery levels.

Acknowledgments

This study was jointly funded by the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA) and Victoria University.

References

1. Collins DJ, Lapsley HM. The social costs of drug abuse in Australia in 1988 and 1992. National Drug Strategy Monograph Series. No. 30. Canberra: Australian Government Publishing Service; 2002.
2. Cvetkovski S. Substance misuse in the city of Maribyrnong: implications for strategic planning. Report. Melbourne: Maribyrnong City Council; 2004.
3. Yano T, Kato B, Fukuda F, Shinbara H, Yoshimoto K, Ozaki A, et al. Alterations in the function of cerebral dopaminergic and serotonergic systems following electro-acupuncture and moxibustion. Neurochem Res 2004;29(1):283–93.
4. Scott S, Scott WN. A biochemical hypothesis for the effectiveness of acupuncture in the treatment of substance abuse: acupuncture and the reward cascade. Am J Acupunct 1997;25(1):33–8.
5. Andersson S, Lundeberg T. Acupuncture – from empiricism to science: functional background to acupuncture effects. Med Hypotheses 1995;45(3):271–81.
6. Sapir-Weise R, Berglund M, Frank A, Kristenson H. Acupuncture in alcoholism treatment: a randomized out-patient study. Alcohol Alcoholism 1999;34(4):629–35.
7. Berry K. Preliminary findings: an examination of the effectiveness of acupuncture as an adjunct to an alcohol and other drug (AOD) treatment program [Master's thesis]. Sydney: University of Technology, Sydney; 2005.
8. Bernstein KS. The experience of acupuncture for treatment of substance abuse. J Nurs Scholarship 2000;32(3):267–72.
9. Bannister H. Windana's drug withdrawal house: an ethnographic study. Melbourne: Windana Society; 2002.
10. Drug and alcohol treatment guidelines for residential settings. Sydney: New South Wales Department of Health; 2007.

Shenzhi Theory: A Clinical Model of the Mind and Mental Illness in Chinese Medicine

Mary Garvey* MHSc
College of Traditional Chinese Medicine, University of Technology, Sydney, Australia

Lifang Qu MMed
Shanghai University of Traditional Chinese Medicine, Shanghai, China

ABSTRACT

The term *shenzhi* means 'spirit-mind' and refers to the five spirits (*shen, hun, po, yi, zhi*) of early Chinese medical theorising. The theory of *shenzhi* provides a conceptual model that helps to explain Chinese medicine's perspective on human consciousness and body-mind physiology. Each of the five spirits (*wushen*) governs certain aspects of mentality and is closely related to sensory faculties, body tissues, visceral systems, and physiological substances. Orderly, integrated *wushen* activities provide the human organism with its distinctive array of mental and sensory abilities including intelligence, insight, attention, and memory. When these physiological activities and relationships are disrupted, a variety of common or more serious disorders may result. Broadly speaking, they are 'mind' or 'mental' disorders – *shenzhi bing*. We discuss some of these to illustrate the diagnostic relevance of *shenzhi* theory for the Chinese medical clinic today. Analysis of their signs and symptoms allows the practitioner to identify disordered *wushen* activities. A brief discussion of psychological classifications, pathomechanisms and treatment examples is included to help link the theory to contemporary clinical presentations.

KEYWORDS Chinese medicine, consciousness, diagnosis, mental disorders, mind, neurosis, perception, physiology, psychology, psychosis.

Introduction

The Chinese medical view of mentality and mental disorders is not a strong feature of its classical discourses, and instances where the Chinese medical perspective does not correspond with contemporary medical and psychiatric nosologies are not uncommon.[1-3] Areas of theoretical disparity between traditional Chinese and contemporary Western medicines provide a point of interest and challenge for clinicians. For example, rather than a Cartesian separation of the physical and mental, Chinese philosophy emphasises the 'one *qi* running through heaven and earth',[4] and Chinese medicine assumes an integrated body-mind. Consequently, TCM physiology emphasises the functional links between its visceral systems and their associated substances, tissues, sense organs, and spirits. In this paper we will demonstrate how the contemporary traditional Chinese medicine (TCM) practitioner can analyse and interpret the signs and symptoms of mental disorder as they appear in the Chinese medical classics, and as they present in their clinics today, using frameworks such as *shenzhi* (神志) theory.

Until the latter part of the Ming Dynasty (1368–1644), Chinese scholar-physicians were mostly content to elucidate and expand upon the illness categories and pathomechanisms described during the Han Dynasty (206 BCE – 220 CE) by the

* Correspondent author; e-mail: mary.garvey@uts.edu.au

Aust J Acupunct Chin Med 2008;3(2):13–17.

Huangdi Neijing (黄帝内经, *Yellow Emperor's Inner Canon*, c. 160 BCE) authors and Zhang Zhongjing (张仲景, 150–219 CE). Flaws and Lake[3] and Rossi[5] discuss the contributions of the Jin-Song-Yuan (265–1368) masters such as Huangfu Mi (皇甫谧), Sun Simiao (孙思邈), Li Dongyuan (李东垣) and Zhu Danxi (朱丹溪). But categories with explicit connotations of mental disorders only began to appear in the Chinese medical literature in the late sixteenth century. An influential scholar-physician of that time was Wang Kentang (王肯堂, 1549–1613). His *Standards of Patterns and Treatments* (*Zheng Zhi Zhun Sheng*, 证治准绳, 1602) contains a treatise on 'mind category' (*shenzhi men*, 神志门), which incorporates over a dozen mental illness terms together into a category whose name 'draws attention to the mental character of the disorders'.[2]

Wang and other writers of the late Ming gathered together previously scattered and miscellaneous references to the mind and emotional disorders to provide a systematic survey of the topic. In his discussion of *shenzhi men*, Wang includes disorders such as withdrawal (*dian* 癫), mania (*kuang* 狂), epilepsy (*xian* 痫), the seven emotions (*qiqing* 七情), depletion-vexation (*xufan* 虚烦), irritation (*zao* 躁), fright (*jing* 惊), and heart palpitations (*xinji* 心悸). Wang quotes extensively from classic texts such as the *Suwen* (素问), *Lingshu* (灵枢), *Nanjing* (难经), *Maijing* (脉经), *Jingui Yaolue* (金匮要略), and *Qianjin Yaofang* (千金要方), and his writings generally stressed the importance and authority of these ancient classics over the later medical canons.[2,6] Whilst contemporary TCM texts employ a number of terms that refer to the mind (for example, *xin* 心, *shen* 神, *zhi* 志, *xinshen* 心神, *jingshen* 精神), from the late Ming, terms such as *qingzhi* (情志, emotions) and *shenzhi* (神志, mind) gained wide acceptance.

The basis of *shenzhi* theory discussed here is the five visceral systems and their associated spirits, which can be found in the *Huangdi Neijing*, especially the eighth chapters of the *Suwen* and *Lingshu*. The reception and interpretation of sensory information relies on these systems and is an important feature of spirit activities and Chinese medicine's perspective on human consciousness.

In the next section, which is on the 'Body-Mind', we use the *Neijing*'s 'five spirits' (*wushen* 五神) model to briefly summarise *shenzhi* theory and the *wushen* associations. The following sections then examine *Shenzhi Bing* (神志病 mind disorders) and their pathomechanisms, and, finally, treatment examples are given to link one of the more common pathomechanisms with appropriate therapeutic strategies. The examples of *shenzhi* disorders, disease names, signs, symptoms, and pathomechanisms, illustrate the discussion, identify key factors for diagnostic differentiation, and anchor the *wushen* model within the Chinese clinical tradition.

Body-Mind

For TCM, *shen* incorporates both physical and mental activities because, in the same way that qi links our ideas of energy and matter, *shen* links our accustomed notions of mind and body.[7] Healthy physiological and mental activities of the *shen* therefore can be observed in external manifestations such as healthy complexion, bright eyes, physical agility, and coherent speech. Here we are using '*shen*' in its global sense, as a catch-all term for human mental–emotional functions. *Shenzhi* (spirit-mind, human consciousness) is another name for the global *shen*, and both terms imply the *wushen*: the *shen*, *hun*, *po*, *yi* and *zhi* – the 'spirit', 'ethereal soul', 'animal soul', 'ideation', and 'mind' respectively.[8] The *wushen* model offers a differentiated portrayal of mental activities indicating some of the complexity and variety of human mentality.[2] Orderly, integrated *wushen* activities perceive, process, and analyse sensory information; their interdependent functions create human consciousness, intelligence, and cognitive ability.[1]

The number five signals that a five phase (*wuxing* 五行) systematic correspondence provides the theoretical underpinning, and that all its relational qualities apply. The normal course of *shenzhi* activities therefore includes and depends upon the close relationships between the *wushen* and with their respective five viscera (*wuzang* 五脏), five sense organs (*wuguan* 五官), and five body tissues (*wuti* 五体). As we know, physicality and mentality are not just closely linked in Chinese medical thinking: the body form (*xing* 形) is the house of the *shen* and *shen* governs the body form. When *xingshen* (形神) are unified the functional activities of the *wushen* manifest externally through the *wuzang*, *wuguan* and *wuti*. Dis-integration occurring in any of the relationships between the *wushen*, and with their respective *zang*, *guan* and *ti* will manifest according to their physiological, mental and sensory associations. These relationships are essential for understanding the pathogenic mechanisms and interpreting the signs and symptoms of mind disorder.

All five systems provide specific ways for understanding sensory information. For example, the heart-*shen* governs the tongue and transmits language information. Thus, social, behavioural and communication skills provide a clear indication of the healthy heart-*shen* maintaining orderly spirit and mental faculties. Heart-*shen* disorder is observable in the complexion and eyes, and the person may experience disturbances involving speech, consciousness, inappropriate moods and laughter. Clinical manifestations indicating *shen* disturbance include dyslogia, aphasia, or incoherent speech, coma, psychosis, mania, or delirium.

The spleen stores the *yi* (意, ideation), which governs thinking, attention, and recollection. Spleen-*yi* is the mental faculty that

deals with the products of sensation and perception, focusing and forming ideas. Essential to heart-*shen* processing of sensory and perceived information is its relationship with spleen-*yi*'s focused attention, recalled experience and knowledge. Their harmonious interaction produces immediate, first-stage analysis and assessment.

The kidney stores the *zhi* (志, mind), opens to the ear, and governs 'seal and store' (*fengcang* 封藏). This means that on the level of spirit-mentality, the kidney-*zhi* enables the perception of auditory information, and participates in and completes the storage of information. Kidney *jing* (精) vacuity can disrupt the heart-*shen*/kidney-*zhi* relationship and patients may encounter problems with memory or auditory function. Many elderly people experience some degree of memory failure and/or auditory deficit corresponding to the decline of *jing* that normally occurs with age. Age-related cognitive decline is a recognised disorder where deterioration in mental function is related to the ageing process. Solving complex problems, or remembering names and appointments becomes more and more difficult with this condition. The impaired memory function and multiple cognitive deficits of dementia patients correspond to disordered kidney-*zhi* activity.[9]

The liver governs the sinews, opens to the eyes, stores the blood, and liver blood holds the *hun* (魂, ethereal soul); so the liver-*hun* participates in the perception of visual information and in the movement and function of the joints. According to the *Neijing*, the *shen* and *hun* must always follow each other, and if the *hun* fails to follow the *shen*, a person's *xing-shen* is no longer unified. Their eyes are blank because the liver-*hun* cannot correctly transmit what it is seeing to the heart-*shen*, or the heart-*shen* cannot assess the matters being perceived by the *hun*-eyes.

The lung stores the *po* (魄, corporeal soul), and healthy lung-*po* activity is closely associated with *jing*-essence. The lung-*po* opens to the nose, and corresponds to the skin and body hair, and thereby participates in perceiving sensations and information via the nose and skin. The *po* is sensitive to the environment around the body, registering cold and heat, and helping us to avoid danger. As well as sensitising the body, the *po* enables physical movement, especially involuntary and instinctual movements and reactions. Disordered or abnormal sensations are typical of *shen-po* disharmony – for example, anosmia, olfactory or tactile hypersensitivity, dysaesthesia, skin paraesthesia, or olfactory hallucinations.

Shenzhi theory describes how the five spirits participate in the experience and analysis of sensory perceptions and the cognitive processes of human consciousness. *Shenzhi* processes depend on close and harmonious relationships between the *wushen*, and with their respective *zang*-viscera, *ti*-tissues, and *guan*-senses. Various aetiological and pathogenic factors can disrupt these relationships and their functional activities. Then, when the *wushen* are disordered, the body-mind (*xingshen*) relationships disintegrate and separate, causing 'somatopsychic' (*xingshen*)[10] disorder, or 'mind disorder' (*shenzhi bing*).

'Spirit-mind disorder' (*shenzhi bing*) is a broad category encompassing many kinds of mental illness, both severe and less severe. In a general sense it occurs when the heart-*shen* cannot govern 'spirit brightness' (*shenming* 神明). *Ming* means bright, radiant, clear, and *shenming* signifies correct, healthy or spirited mentality and the power of human consciousness. If *ming*-brightness is lost, the mind is disordered and the *shen* cannot process, co-ordinate or complete the information transmitted from the five sense organs.

Less severe types of *shenzhi bing* roughly correspond to psychiatry's neurotic, depressive, or anxiety disorders. The more severe illnesses present with grossly disorganised speech and behaviour, auditory, visual, olfactory, gustatory, and tactile hallucinations, catatonic stupor or excitement. These kinds of signs and symptoms indicate the *shen* is severely disordered as, for example, with schizophrenia and psychosis. Visual hallucinations, hysterical paralysis, trance, or catatonic stupor reveal that the *hun* and its functions are also disordered; if there are auditory hallucinations, *zhi* activities are disordered; the patient's feelings of physical discomfort are due to *xing-shen* disharmony.

Shenzhi Bing: Pathomechanisms

Healthy *shenzhi* activities can be disrupted by factors from within or outside the body. The depletion of vital substances, yin-yang imbalance, emotional or psychic trauma,[11] summer heat, phlegm-fire, blood stasis, and so on, can disturb *shenzhi* physiology. In the later Han Dynasty, Zhang Zhongjing wrote that the *hun-po* (魂魄) disorder (where 'the patient cries out as if haunted') is due to 'depleted *qi* and blood' (*xue qi shao ye* 血气少也).[12] This is a broad physiological situation whereby depleted vital substances cannot nourish the *zang*-visceral systems, and Zhang describes the ramifications for their associated tissues, senses, and spirits, to identify the key diagnostic features.

Similarly, 'lily disease' (*baihe bing* 百合病)[12] illustrates *shen-po* (神魄) disorder. TCM texts interpret Zhang's *baihe bing* formulae for the treatment of lung and heart yin vacuity patterns, but the features he documents clearly identify the concomitant *shen-po* disharmony. The patient's experience of hot and cold sensations are unrelated to fever, chills or environment; s/he may want to walk about, but soon becomes

tired; although the food is delicious this person finds its smell repugnant. The desire to eat with dysphagia and the need for rest with restlessness is also typical of *xing-shen* disharmony whereby bodily responses are discordant with heart-*shen* inclinations.

Analysis of Zhang's formulae for *baihe bing* reveals that their mechanisms (to nourish lung and heart yin) serve to harmonise yin and yang, and settle the *shen* and *po*. In TCM practice today, and with appropriate clinical presentations, Zhang's formulae for *baihe bing* are still used for cases involving clinical depression or anxiety disorders, and for neuroses such as somatisation disorder or histrionic personality disorder.[3,13]

Zhang introduced pathological terms such as depletion vexation (*xufan* 虚烦) and depletion taxation (*xulao* 虚痨) for conditions where there is severe depletion of qi, blood, yin-qi, organ function, and so on. In the *Shang Han Lun* (伤寒论) this is applied in cases of weakness and debility after febrile disease. The leading medical figure of the Tang Dynasty, Sun Simiao (c. 581–682 CE), also uses Zhang's terms and sometimes applies them to other areas of clinical practice. One of Sun's major contributions to the Chinese medical tradition is his discussion of gynaecological and obstetric disorders. Interestingly, he develops the theoretical parameters for *xulao* by applying it to cases of weakness and depletion experienced by women after childbirth.

Whilst post-febrile and post-partum patients would seem to require very different treatment and care, pathomechanism(s) linked to individual clinical presentations is a key element of Chinese medicine's diagnostic perspective. In *xulao*–depletion taxation, the severe depletion of qi and blood means that the heart and liver are unable to provide quiet lodging and nourishment for the *shen* and *hun*. Signs and symptoms can range from fatigue, to agitation and general malaise, to anxiety, psychosis with hallucinations, and even convulsions. In Zhang and Sun's texts, the clinical features for these disorders include physical, sensory and mental signs and symptoms, for example: dimmed eyesight, nasal congestion, instability of the *hun* and *po*, convulsions, heart discomfort, post-partum discomfort, numbness and muscle spasm, unsettled will, confusion, disorientation, and deranged speech.[14,15]

Treatment

In this section we discuss one formula and two examples of its application for mental disorder to help illustrate some important features of the Chinese medical tradition. TCM practitioners will be familiar with these features in other areas of their clinical practice: the Western separation between physical and mental resources is artificial and unhelpful for Chinese therapeutic strategies; accurate diagnosis relies on the correct identification of the aetiological circumstances, pathomechanisms, and the patterned associations between organs, tissues, substances, senses and spirits; and, classical formulae can be understood, adjusted and applied in different ways.

Zhang Zhongjing and Sun Simiao's treatments target the affected vital substances, visceral systems and *wushen*, and their formulae are modified to match variants in clinical presentations. Occasionally, Sun utilises and modifies prescriptions devised by Zhang. For example, the key pathomechanism for Zhang's Minor construct the middle decoction (*Xiao jian zhong tang* 小建中汤) is *xulao*–depletion taxation where spleen and stomach weakness lead to the dissipation of qi and blood. The spleen vacuity drains its mother, the heart, affecting the *shen*. Clinical features include abdominal pain alleviated by warmth, with fatigue, poor appetite, vexation, and palpitations.

The *xulao* pattern can occur due to a number of causative circumstances (such as overwork or poor diet) causing the abdomen to lose the warmth of the yang qi. In the *Treatise on Cold Damage* (*Shang Han Lun*), Zhang applies *Xiao jian zhong tang* to his discussion of febrile illness in cases where there is external wind cold with spleen and stomach vacuity. *Xiao jian zhong tang* warms and strengthens the spleen and stomach, relieves abdominal pain, nourishes qi and blood, and harmonises yin and yang.[15]

Dang gui construct the middle decoction (*Dang gui jian zhong tang* 当归建中汤) is from Sun Simiao's *A Thousand Golden Prescriptions* (*Qianjin Yaofang*). Sun's famous formula for post-partum emaciation and weakness is a simple but elegant modification of Zhang's original. He adds *dang gui* (当归) to subtly shift the formula's emphasis towards nourishing and harmonising the blood – a key therapeutic strategy for female patients after delivery.[16-18] Both formulae target the spleen and stomach ('construct the middle') because in Chinese medicine, healthy spleen and stomach function produces qi and blood, and blood achieves numerous essential physiological tasks including that of nourishing and holding the *wushen*. Of all the *wushen*, the *shen* and *hun* in particular rely on heart and liver blood for their part in mental activities.

Treatments and prescriptions for women experiencing post-partum mood disorders (such as post-natal depression) will vary to address the presenting signs and symptoms and relevant pathomechanism(s). *Dang gui jian zhong tang* may be applied in cases where there is abdominal pain relieved by warmth, fatigue, palpitations, agitation, depression, and insomnia. For this kind of clinical presentation, Sun's formula addresses the key pathomechanisms by warming and strengthening the middle qi, harmonising yin and yang, and nourishing the blood.

Clinical Commentary

Many clients visiting TCM clinics today present with some form of 'mind' disorder as a chief or accompanying complaint, and the relevance of *shenzhi* theory for contemporary practitioners is diagnostic in the first instance. Information about the *wushen* is drawn mainly from the *Huangdi Neijing*: understanding their activities and associations allows the practitioner to identify and differentiate 'mind' illnesses within the traditional Chinese medical framework. We have extended the model's diagnostic information here to include examples of 'mind' disorder and suggest psychiatric classifications where appropriate. This information is linked to the discussion of pathomechanisms and treatment approaches to assist practitioners to utilise *shenzhi* theory in their therapeutic decision-making.

Conclusion

Shenzhi theory provides a perspective on the mind that elucidates important distinctions, interrelationships and features of *xingshen* physiology and disorder. *Shenzhi* theory is derived from the *Neijing*'s discussion of the *wushen*, and therefore draws upon *wuxing* systems of correspondence. To produce human consciousness, the *wushen*, their associated viscera, sense organs, tissues, and their harmonious interactions process a complex stream of visual, olfactory, taste, tactile, auditory and other perceived information. Careful observation and correct understanding of signs and symptoms allow today's practitioners to identify disease patterns, differentiate *shenzhi* disorder, and recognise pathogenic mechanisms.

Zhang Zhongjing and Sun Simiao match key clinical presentations and pathomechansims with representative herbal formulae. Signs and symptoms are evaluated against the theoretical backdrop of healthy physiology (vital substances, visceral systems, body tissues, sense organs and spirit activities), aetiology (how orderly systems become disrupted), and pathomechanism (the effects of disturbance). Prescriptions address the presenting patterns of disruption, and are rationally connected to Chinese medicine's concepts of human physiology and the mechanisms of disorder. From this very small snapshot of Chinese medical history, we see how early theoretical models develop and respond to the masterful application of clinical observation and reasoning.

The West's separation of mind and body has never been a feature of Chinese medical theorising, and surviving texts show that it was not until the late Ming Dynasty that Chinese medicine began to document information about the 'mind' and its disorders as a distinct category. While Western psychiatry has investigated and categorised mental illness according to its analysis of statistical and biological data, TCM clinical practice still utilises the manifestation patterns, illness categories and treatment methods that have been drawn from its classical literature. Consequently, TCM categories may overlap but do not always directly correlate with contemporary psychiatric classifications. In its narrow sense *shenzhi bing* refers to serious mental and neurological disorders such as schizophrenia and epilepsy. More broadly it refers to any functional disturbance causing spirit-consciousness, body-mind, and cognitive-sensory disorders.

References

1. Qu LF, Garvey M. Shen-zhi theory: analysis of the signs and symptoms of mental disorder. Eur J Orient Med 2006;5(2):4–16.
2. Chiu ML. Mind, body, and illness in a Chinese medical tradition [PhD thesis]. Cambridge, MA: Harvard University; 1986.
3. Flaws B, Lake J. Chinese medical psychiatry: a textbook and clinical manual. Boulder, CO: Blue Poppy; 2001.
4. Zhang D. Key concepts in Chinese philosophy. Beijing: Foreign Languages Press; 2002.
5. Rossi E. Shen: psycho-emotional aspects of Chinese medicine. London: Churchill Livingstone; 2007.
6. Chen H. Medicine, society, and the making of madness in imperial China [PhD thesis]. London: University of London; 2002.
7. Hsu E. Spirit (shen), styles of knowing, and authority in contemporary Chinese medicine. Cult Med Psychiatry 2000;24(2):197–229.
8. Wiseman N, Feng Y. A practical dictionary of Chinese medicine. Brookline, MA: Paradigm Publications; 1998.
9. APA. Diagnostic and statistical manual of mental disorders (DSM-IV). Washington, DC: American Psychiatric Association; 1995.
10. Unschuld PU. *Huang Di Nei Jing Su Wen*: nature, knowledge, imagery in an ancient Chinese medical text. Berkeley, CA: University of California Press; 2003.
11. Garvey M. Hysteria. Clin Acupunct Orient Med 2001;2(4):221–7.
12. Zhang Z. Synopsis of prescriptions of the golden chamber: a classic of traditional Chinese medicine. Beijing: New World Press; 1987.
13. Liu G. Fundamentals of formulas of Chinese medicine. Beijing: Hua Xia Publishing House; 2002.
14. Wilms S. The female body in medieval China: a translation and interpretation of the 'Women's Recipes' in Sun Simiao's *Beiji Qianjin Yaofang* [PhD thesis]. Tucson: University of Arizona; 2002.
15. Zhang Z. *Shang Han Lun*: on cold damage. Translation and commentaries by Mitchell C, Feng Y, Wiseman N. Brookline, MA: Paradigm Publications; 1999.
16. Furth C. Blood, body and gender: medical images of the female condition in China, 1600–1850. Chin Sci 1986(7):43–66.
17. Bensky D, Barolet R. Chinese herbal medicine: formulas and strategies. Seattle: Eastland Press; 1990.
18. Yeung H. Handbook of Chinese herbal formulas. Rosemead, CA: Institute of Chinese Medicine; 1995.

Using the Nominal Group Technique to Evaluate a Chinese Medicine Basic Theory Course for Medical Doctors: A Case Study

Xiaoli Li[*1,2] MMed
Angela Weihong Yang[1] PhD
Charlie Changli Xue[1] PhD
Qingguo Wang[3] PhD

1. Division of Chinese Medicine, School of Health Sciences, RMIT University, Australia
2. School of the Humanities, Beijing University of Chinese Medicine, China
3. School of Pre-clinical Medicine, Beijing University of Chinese Medicine, China

ABSTRACT

Aims: To evaluate the course of Chinese Medicine Basic Theory (CMBT) delivered to medical doctors for course improvement using an established Nominal Group Technique (NGT). Methods: 14 Iranian students with medical backgrounds at Beijing University of Chinese Medicine completed the two NGT sessions. Results: 20 prioritised items were produced. Of these, clinical relevance, quality of teaching and learning activities and English language proficiency were considered the most important areas. Conclusion: The quality of the CMBT course might be improved when it is implemented with clinically relevant content knowledge, constructively aligned teaching and learning activities with quality delivery in the classroom.

KEYWORDS nominal group technique, course evaluation, traditional Chinese medicine, education.

Introduction

It is important to evaluate a healthcare education program to gather feedback for quality improvement.[1] With the increased global usage of Chinese medicine (CM), CM higher education has been introduced in various institutions besides being incorporated into conventional curricula for medical students in China,[2] Australia,[3] the United States[4] and elsewhere[5] around the world.

As a fundamental course in a CM program, Chinese Medicine Basic Theory (CMBT) provides students with basic knowledge and skills for future learning. The importance of CMBT has been recognised widely;[6,7] some reports on CM education[8-11] have been published and a few of them indicate the challenge of teaching Western doctors about CM.[12] However, original studies on evaluation of CMBT teaching as an individual course to medical doctors are still rare.

* Correspondent author; e-mail: xiaoli.li@rmit.edu.au

The nominal group technique (NGT) is an evaluation tool that has been extensively used in education evaluation[13,14] and other settings as a structured group activity to reach group consensus. It provides semi-quantitative, rank-ordered feedback[1] about a group of learners' perceptions of good and bad aspects of an educational program. The advantages of using NGT compared with survey, interview and interactive group techniques are that it can focus on student opinions and identify individual concerns while maintaining the group dynamics.[13] It is highly structured and easy to conduct. It has been proven to be effective when used to evaluate teaching in diverse higher educational settings.[15]

This study employed the NGT procedures to evaluate CMBT teaching using Iranian students with medical doctor background as sample participants. It aimed to provide feedback to lecturers for improving teaching of this course to overseas students.

Methods

The NGT method employed in this study consisted of five phases as described elsewhere.[14] An extra translation interval between voting and reassembly of the whole group phases was designed because different languages were used in the two separate sessions. Detailed procedures are summarised in Figure 1.

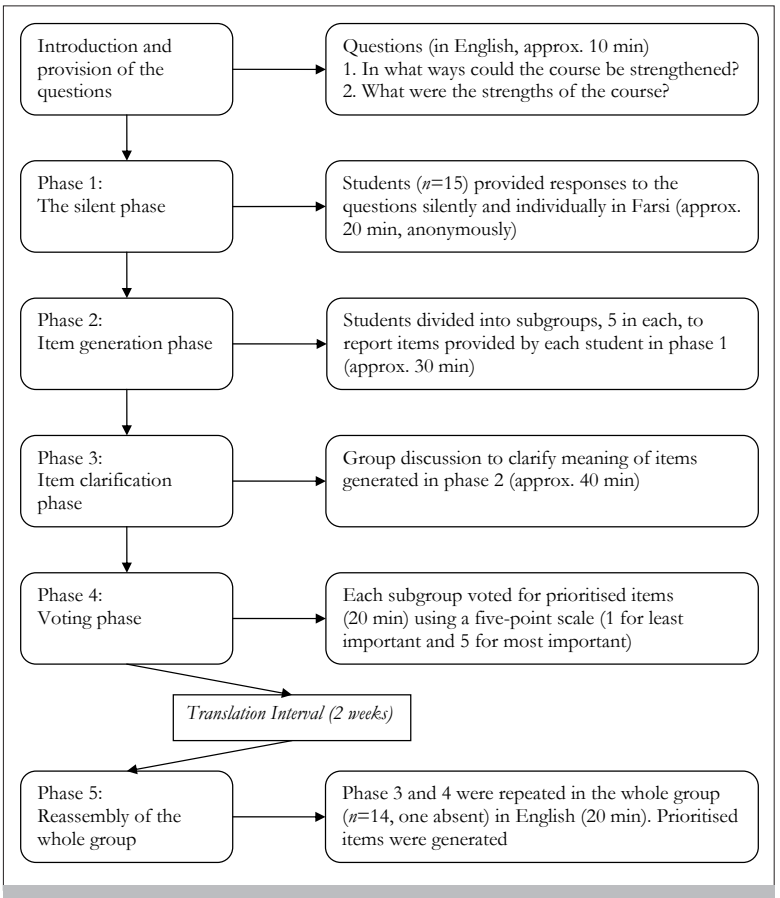


FIGURE 1 The NGT procedures for course evaluation

SUBJECTS AND SETTINGS

A cohort of 20 Iranian medical doctors who completed the CMBT course were invited to participate in the NGT sessions in late 2006. These students commenced their studies in a four-year PhD CM program in English at Beijing University of Chinese Medicine from 2005.

CURRICULUM DESCRIPTION

CMBT is a fundamental and the first theoretical course in the CM program, including 40 sessions with 135 minutes per session for these students. Traditional teacher-centred didactic lectures were the major teaching method employed although students were also involved in interactive questions and answers, tutorials, group presentations and discussions, both inside and beyond the classroom. The teaching language for this course was English. Assessment tasks included participation in class, oral presentations and a final written exam.

CONDUCT OF NGT SESSIONS

The NGT evaluation was conducted following the procedures outlined in Figure 1.

In the first session, instructions of the procedure were provided to participants in English while the following group activities by the participants were in Farsi.

Students were first required to respond to the following two questions in writing:
Question 1: In what ways could the course be strengthened?
Question 2: What were the strengths of the course?

Each student was then asked to rank, in order of priority, the five items most important to him or her, on a scale of 5 (most important) to 1 (least important) after item generation and clarification within each subgroup. The voting papers were collected by subgroup co-ordinators.

A break between the two sessions was used for translation of students' feedback from Farsi to English by the group co-ordinators. The translation was checked and reviewed by another native speaker of Farsi teaching English as a second language. Before the second session, a final list of prioritised items without editing were thus produced and in the final phase it was presented to the whole group assembly for group item generation, clarification and voting in English.

Results

Fifteen (5 females and 10 males, aged 32.64 ±2.41) of the 20 Iranian medical doctors volunteered to participate in the two NGT evaluation sessions. Fourteen completed both, which lasted 2 hours (Phases 1–4) and 20 minutes (Phase 5) respectively (Figure 1).

In the first NGT session, 18, 14 and 13 items were generated by the three subgroups in response to Question 1. Thirteen, 10 and 8 items were identified by the three subgroups in response to Question 2. Each subgroup voted five prioritised items for each question. By the end of the first NGT session, a total of 15 items (in Farsi) for each question were received from all the participants.

In the second NGT session after translation, phase 3 and 4 were repeated with the whole group. Fourteen and 11 non-redundant items for Questions 1 and 2 were presented to participants for voting. The top ten items for each question, the number of voting students and the total score for each item are summarised in Table 1.

Discussion

To the best of our knowledge, this is the first study to apply the established NGT method in CM course evaluation. Findings from this study showed that several changes are needed for improvement of the course: more clinical relevance of the course, quality of teaching and learning activities and better mastery of the teaching language.

Clinical relevance is the main concern from these medical doctors with working experience. This is consistent with other papers on similar topics[7] since involvement of clinical teaching is defined as a unique feature of medical education.[16] Although CMBT has long been considered a basic theory course, it is critical to provide more clinically relevant knowledge and skills to students with clinical medical backgrounds.

Quality of teaching and learning activities, including organisation of the course, teaching strategy, clarity, assessment, grading and enthusiasm, have also drawn attention. These items are shared by diverse disciplines. Appropriate teaching methods and assessments are required to be carefully organised

TABLE 1 The top ten NGT items in descending rank order

Rank order on question 1: In what ways could the course be strengthened?	No. of students (n = 14)	Score	Rank order on question 2: What were the strengths of the course?	No. of students (n = 14)	Score
1. More clinical knowledge	12	45	1. Well-prepared lectures with PowerPoint	12	39
2. Avoid monotone in speaking	10	32	2. Devotion of the instructor to improving teaching	9	35
3. More proper distribution of time among the chapters	9	26	3. Self assessments (quizzes)	8	30
4. Bridging the gap of English proficiency between the instructor and students	7	24	4. Punctual instructor	7	25
5. Use more attractive teaching methods besides lectures	6	17	5. Energetic, enthusiastic and concerned instructor	8	20
6. Use standardised exam questions	4	14	6. Fluent English competency	7	14
7. Speaking at a proper pace	3	11	7. Inviting a skilled professor for a lecture	5	14
8. Better explaining the contents with more examples	5	7	8. Providing supplementary materials to improve students' knowledge	5	12
9. Students' presentations are too early	4	7	9. Student presentations	4	8
10. Better informing of the scoring criteria at the beginning	1	5	10. Classes focus on the teaching contents	3	7

for medical doctors when they receive complementary and alternative medicine education,[17] including CM education.

English language was pointed out as another issue to be considered as it is a second language for both the instructor and students. Monotone should be avoided. The competency of English language is becoming recognised as a key barrier for sharing CM knowledge and promoting its globalisation. The level of mastery of the teaching language seems to contribute partially to the teaching quality.

In summary, it seems from this case study that a CMBT course might produce deeper learning among students with medical background when it is implemented with clinical-relevant content knowledge, constructively aligned teaching and learning activities with quality delivery. The NGT method used in this study showed that the selected procedures were effective for collecting students' opinions about their learning experiences, which is consistent with other reported studies.[1,13-15] The feedback generated from the NGT procedures covers a range of topics in the students' interest.

This is a small case study evaluating a CMBT course delivered to overseas medical doctors. As there is limited literature on evaluation of CM teaching,[18] future empirical educational studies with a larger sample size are needed.

Clinical Commentary

CMBT is critical to the overall learning and practice of this traditional healing art. The learning outcome of this course has a fundamental impact on the development of graduates' clinical capabilities. Findings from this study showed clinically orientated learning approaches as one priority among students with a clinical medical background when learning CMBT. This well-developed group technique may also be applied to evaluation of practitioner or patient perceptions of a specific condition/therapy in clinical settings as well as in educational evaluation.

Acknowledgments

The co-authors appreciate the advice provided by Dr Charlotte Paterson on the use of NGT. We would also like to thank Prof Wang Wei at Beijing University of Chinese Medicine and Savita Hazari at RMIT University Library for their assistance.

References

1. Dobbie A, Rhodes M, Tysinger JW, Freeman J. Using a modified nominal group technique as a curriculum evaluation tool. Fam Med 2004;36(6):402–6.
2. Schwarz MR, Wojtczak A, Zhou T. Medical education in China's leading medical schools. Med Teach 2004;26(3):215–22.
3. Xue CC, Wu Q, Zhou WY, Yang WH, Story DF. Comparison of Chinese medicine education and training in China and Australia. Ann Acad of Med Singapore 2006;35(11):775–9.
4. Pearson NJ, Chesney MA. The CAM education program of the national center for complementary and alternative medicine: an overview. Acad Med 2007;82(10):921–6.
5. Fang T, Bo J, Feng C, Xia Z. Analysis and strategy of overseas higher education in Chinese medicine. Educ Chin Med 2008;26(5):62–4.
6. Gaster B, Unterborn JN, Scott RB, Schneeweiss R. What should students learn about complementary and alternative medicine? Acad Med 2007;82(10):934–8.
7. Gensini GF, Conti AA. Academic education in complementary medicine: a tuscan methodological perspective. Evid Based Complement Altern Med 2007;4(Suppl 1):33–6.
8. Patterson SM, Graf HM. Integrating complementary and alternative medicine into the health education curriculum. J Health Educ 2000;31(6):346–51.
9. Brokaw JJ, Tunnicliff G, Raess BU, Saxon DW. The teaching of complementary and alternative medicine in U.S. medical schools: a survey of course directors. Acad Med 2002;77(9):876–81.
10. Maizes V, Schneider C, Bell I, Weil A. Integrative medical education: development and implementation of a comprehensive curriculum at the University of Arizona. Acad Med 2002;77(9):851–60.
11. Witt CM, Brinkhaus B, Willich SN. Teaching complementary and alternative medicine in a reform curriculum. Forsch Komplementmed 2006;13(6):342–8.
12. Konefal J. The challenge of educating physicians about complementary and alternative medicine. Acad Med 2002;77(9):847–50.
13. Chapple M, Murphy R. The nominal group technique: extending the evaluation of students' teaching and learning experiences. Assess Eval in High Educ 1996;21(2):147–59.
14. Lloyd-Jones G, Fowell S, Bligh JG. The use of the nominal group technique as an evaluative tool in medical undergraduate education. Med Educ 1999;33(1):8–13.
15. Adams M. Evaluation of teaching and courses using the Nominal Group Technique. Higher education: blending tradition and technology. In: Proceedings of the 1995 Annual Conference of the Higher Education Research and Development Society of Australasia (HERDSA); 1995. p. 59–64.
16. Kogan JR, Shea JA. Course evaluation in medical education. Teach Teacher Educ 2007;23:14.
17. Sierpina VS, Schneeweiss R, Frenkel MA, Builik R, Maypole J. Barriers, strategies, and lessons learned from complementary and alternative medicine curricular initiatives. Acad Med 2007;82(10):946–50.
18. Hui KK, Zylowska L, Hui EK, Yu JL, Li JJ. Introducing integrative East-West medicine to medical students and residents. J Altern Complement Med 2002;8(4):507–15.

Acupuncture for the Treatment of Normal Transit Constipation: A Case Report

Jason Z Kremer*
John C Deare MAppSc(Acu)

Endeavour College of Natural Health, Gold Coast, Australia

ABSTRACT

Constipation has a high level of prevalence among older females in developed countries like Australia. This case report documents the acupuncture treatment of an 85-year-old female who presented to a student acupuncture clinic with the chief complaint of chronic constipation. The patient had experienced fifteen years of restricted bowel movements, with associated straining and sensation of incomplete evacuation. Her condition had not benefited substantially from Western medicine or consultation with a nutritionist. Secondary symptoms/complaints included neck pain, lower back pain, deteriorating eyesight and headache. Acupuncture was the primary intervention utilised in accordance with a number of classic point formulae, in combination with patient education to eliminate the herbal supplement and address dietary concerns. After weekly acupuncture treatments over eight weeks, the patient reported no longer experiencing constipation and this effect had lasted up until the time of writing. Similar results were attained for each of the patient's secondary complaints.

KEYWORDS chronic constipation, normal transit constipation, neck injury, headache, purgatives, acupuncture, moxibustion.

Introduction

Constipation is defined as the infrequent passage of hard stools with possible straining, abdominal or rectal discomfort, and the sensation of incomplete evacuation.[1] A systematic review of epidemiological studies for constipation in Australia and Europe has found prevalence ranges from 12% to 19%, with a female to male ratio of more than two to one.[2] Prevalence increases with age, and the incidence of chronic constipation in women over the age of 70 is 25%.[3] Conventional Western medical treatment for constipation varies with aetiology but often relies on dietary modification, use of laxative medications and in severe cases corrective surgery.[4]

The treatment of constipation with acupuncture was first documented in the Jin Dynasty (265–420 CE) by Huang Fu Mi in *The A-B Classic of Acupuncture and Moxibustion*. According to the protocol of a Cochrane systematic review,[5] many clinical trials for the treatment of constipation with acupuncture have been conducted, but in general, those studies have produced inconclusive results.[5] A review of modern traditional Chinese medicine (TCM) literature finds that protocols for acupuncture treatment of constipation are well established.[6-9] The treatment detailed in this report was formulated in accordance with these protocols.

Case history

The patient had been receiving acupuncture intermittently for six months before the first consultation with the author at the Endeavour College of Natural Health (formerly ACNM).

* Correspondent author; e-mail: jzkremer@hotmail.com

Aust J Acupunct Chin Med 2008;3(2):22–27.

The earlier acupuncture treatments had yielded short-term symptomatic relief, without the long lasting improvement that the patient desired. The main complaint was chronic constipation, a diagnosis based on a 15-year history of sluggish bowel movements, with associated straining and the perception of incomplete evacuation. One episode of straining had precipitated a transient ischaemic attack, as diagnosed by her general practitioner (GP) 18 months previously.

The patient was achieving three bowel motions per day for the past six months using Cascara Sagrada (*Rhamnus purshiana*), a herbal laxative native to North America. The patient was recommended Cascara by a health food shop attendant and its daily use had increased her bowel movements from three per week, to three per day. This change in frequency had prompted the patient's GP to make the diagnosis of normal transit constipation, for, despite the frequent bowel movements, the patient believed that she was still constipated. Further research revealed that Cascara is strictly contraindicated for use after eight to ten days from the initial dose.[10] According to Mills and Bone, 'Chronic use may cause transient pigmentation to the wall of the colon' that has been linked to the incidence of colorectal cancer.[11]

The patient reported that her stools were small, dry pebbles that were difficult to pass, which indicates blood deficiency.[8] However, upon questioning, the patient reported a persistent feeling of distension on the left side of the abdomen superior to the umbilicus, coupled with a 'twisting sensation' in the abdomen inferior to the umbilicus. In TCM terms, the twisting sensation indicates cold, qi or blood stagnation and the abdominal distension indicates Spleen qi deficiency or dampness.[12] The patient described the twisting sensation as 'feeling like a kink in the bowel', worse before defecation and only temporarily relieved by subsequent bowel movement, which is suggestive of a full pattern. Overall, this combination of symptoms pointed to a complex aetiology that seemed, in the absence of other stimuli, to be related to the prolonged use of Cascara.

The patient presented with the secondary complaints of neck pain, headache, lower back pain and eye pain. Her eye problems included near blindness of the right eye and deteriorating vision of the left eye. She also suffered macular degeneration and was receiving monthly intraocular injections of the anti-angiogenic drug Lucentis. The patient reported lower back pain, which was more prevalent at the end of the day and exacerbated by such tasks as hanging out washing or carrying groceries. Her neck and lower back pain had been present since the age of 20, when a fall from a horse had resulted in a hairline fracture of C4. In the 65 years since her fall, she had experienced intermittent neck pain, which had worsened in severity and frequency in the last five years. After the transient ischaemic attack 18 months before, the patient's GP had diagnosed high blood pressure and prescribed Prinivil, an anti-hypertensive drug.

Palpation of the neck revealed a tight, convoluted fibrosis on the left side of the transverse processes of the third and fourth cervical vertebrae, near the acupuncture point LI 18 *Futu*. The patient reported that episodes of pain began as stiffness on the left side of the neck that radiated to the occipital region, before moving into a headache focused behind the left eye (the eye in which she had been receiving Lucentis injections). Range of movement (ROM) examination of the neck showed limitation in all directions. The patient experienced pain when flexing forward or rotating bilaterally. When asked to rate her pain level on a scale of zero to ten, with zero being no pain and ten being excruciating pain, her neck pain registered as a consistent seven out of ten. Palpation of the lower back revealed severe bilateral tightness in the quadratus lumborum muscles around BL 23 *Shenshu* to BL 25 *Dachangshu* and in the erector spinae muscles near BL 20 *Pishu* to BL 21 *Weishu*. The patient's lower back pain registered as five out of ten. Her headaches were dull and throbbing, registering five out of ten and occurring on average every second day.

The patient frequently missed lunch or breakfast, which in Chinese dietetics is seen as a possible cause of injury to the Spleen.[13] She reported drinking a litre and a half of water per day and three to five cups of tea or coffee. She had flushed cheeks and the lenses of her eyes had a discernible opacity. The patient reported sleeping uninterrupted for nine hours per night from nine o'clock pm to six o'clock am. She had a warm internal temperature with 'five hearts hot' and flushing of the chest and throat. She often felt warm at night, sleeping with little more than a sheet. She preferred cool drinks and rarely perspired. Despite her many health issues, the patient was lucid, alert and in good spirits.

The patient's radial pulse was fine and weak in both lower *jiao* positions representing the Kidneys, less weak in the Spleen position, normal or unremarkable in the Liver position and throbbing in both the upper *jiao* positions. The patient's tongue was thin, with a pink/red body, fine cracks and a clear wet coating. The thin tongue with pink/red body and fine cracking is indicative of chronic yin deficiency.[12] The weakness of the pulse in the lower *jiao* positions suggested the presence of Kidney deficiency and the throbbing in the upper *jiao* represented the presence of heat. In combination, this pulse presentation pointed towards the presence of Kidney yin deficiency.

TCM DIFFERENTIAL DIAGNOSIS

This patient presented a complex case with contradictory clinical features and an overall presentation that did not easily

fit any one pattern. The root cause of the constipation was difficult to ascertain, in large part because the patient's reliance on Cascara might have masked many of the signs that would determine which TCM pattern was primarily involved. For example, the patient passed dry, pebble-like faeces, which could indicate blood deficiency, but the patient no longer strained when defecating, nor had the pallor, palpitations, pale tongue or thready/choppy pulse to confirm blood deficiency.[8,9] The patient suffered from abdominal distension, which may indicate Spleen qi deficiency or damp, but no other symptoms presented which would relate to these patterns.

The student practitioner who treated the patient previously had made the primary pattern diagnosis of Liver qi stagnation attacks Spleen. Treatments had focused on harmonising the Liver and tonifying the Spleen with the primary points: LR 3 *Taichong*, LR 13 *Zhangmen*, BL 18 *Ganshu*, CV 12 *Zhongwan*, SP 6 *Sanyinjiao*, ST 36 *Zusanli* and BL 20 *Pishu*. The diagnosis of Liver attacks Spleen was possible because of excess Liver related signs such as eye problems and headaches focused around the eyes, coupled with the Spleen deficiency sign of abdominal distension, but the patient's pulse, age and lack of corroborating Liver qi stagnation and Spleen deficiency signs made this diagnosis unlikely.

In TCM, constipation is caused by pathologies that disrupt the Spleen, Stomach, Kidney, Liver and Lung, and ultimately impair the Large Intestine's function of transmitting and excreting stools.[8] The various patterns that are associated with constipation are heat accumulation, qi stagnation, qi deficiency, blood deficiency and yang deficiency.[8] These patterns are broadly divided into deficiency and excess types, but in this case both deficiency and excess signs were present. For example, there were indications of heat, such as dry faeces, internal warmth, flushing in the chest and throat and 'five hearts hot', but no signs of full heat, such as rapid pulse, red tongue with yellow coat or foul smelling stools and breath.

Deficiency signs were observed in the pulse and tongue, and because of the patient's age it was assumed that some element of Kidney qi deficiency was present.[12] This was confirmed by the lower back ache arising from such tasks as hanging out washing or carrying shopping. The combination of Kidney deficiency signs coupled with mild heat signs in the upper *jiao*, suggested a deficiency of Kidney yin.[14] As people enter old age, the yin aspect of the body, particularly Kidney yin, starts to decline, and this effect is often compounded by long-term purgative use.[8] The Kidney opens out into the two orifices of the lower *jiao* and is associated with defecation and urination. It also influences the functioning of the Lung which has an important role in assisting the Large Intestine to eliminate waste from the body. The absence of specific symptoms reflecting Lung dryness such as sore, dry throat and dry mouth made it difficult to include Lung Yin Xu as a major aetiology in this case.

With the additional information concerning the patient's neck injury, which centred on the Large Intestine channel at LI 18 *Futu*, it was considered that some relationship may have existed between the Large Intestine channel obstruction and the obstruction in the large intestine itself. The concept that channel obstruction may affect organ function has many empirical precedents and is accepted as a facet of channel theory.[6] In this case it was considered that the neck injury centred on the Large Intestine channel may have contributed to the constipation in the large intestine organ.

Kidney yin deficiency coupled with Large Intestine organ and channel obstruction were considered the primary causative factors of the patient's constipation. In light of this aetiology, the acupuncture treatment focused on clearing stagnation in the Large Intestine and tonifying Kidney yin. The fact that the patient was elderly also had a bearing on the application of the treatment as it is considered unwise to over-select points in older patients whose constitution is typically weaker.[14]

CONSTIPATION IN WESTERN MEDICINE

In Western medicine the majority of constipation cases are functional disorders that have no identifiable structural cause.[1] Normal transit constipation is the most common constipation type and involves a normal rate of colonic motility (the contraction and relaxation of muscles to move contents through the colon), but the patient perceives constipation.[15] Changes that occur in normal transit constipation relate to stool consistency, the possibility of increased rectal contraction, and decreases in rectal sensation.[16] Stools are often hard and dry making them difficult to pass and this may result in bloating and abdominal pain and discomfort.[16] The causes of normal transit constipation are not completely understood, but are believed to be due to the perception of difficult evacuation, the presence of hard stools, and psychological factors that inhibit defecation.[1]

TCM DIAGNOSIS

Stagnation in Large Intestine organ and channel, and Kidney yin deficiency.

TCM TREATMENT PRINCIPLE

Moisten and move stagnation in the Large Intestine organ, clear stagnation in the Large Intestine channel and tonify Kidney yin. This treatment principle was focused on clearing stagnation in the Large Intestine organ, which is central to any constipation treatment, and clearing stagnation in the Large Intestine channel, which addresses the relationship between the patient's neck injury and her bowel dysfunction. The tonification of Kidney yin was aimed at moistening the lower

jiao to complement the effect of the constipation treatment, and target the patient's lower back pain and empty heat signs.

TCM TREATMENT PLAN

Acupuncture for constipation: ST25 *Tianshu*, BL25 *Dachangshu*, TE6 *Zhigou* – reduce; KI6 *Zhaohai* – tonify. Acupuncture for neck and headache: LI4 *Hegu*, LU7 *Lieque* and *Ashi* points near LI18 *Futu* – reduce. Acupuncture for low back: BL23 *Shenshu*, BL25 *Dachangshu*, BL40 *Weizhong* – tonify. The addition of needle head moxa to ST36 *Zusanli* was introduced in the fourth treatment for general constitutional qi and blood tonification.

TCM TREATMENT RATIONALE

The treatment of all constipation types commonly involves needling ST25 *Tianshu* and BL25 *Dachangshu*, along with TE6 *Zhigou* and KI6 *Zhaohai*.[6-9] ST25 *Tianshu*, the Front *Mu* point of the Large Intestine, is a major point in treating all constipation types and has the widest application of any point for treating Large Intestine conditions.[17] BL25, the Back *Shu* point of the Large Intestine, is used to supplement any treatment that focuses on the Large Intestine and is used for constipation of any aetiology.[17] TE6 is another major point in the treatment of constipation and is used to move qi in the Large Intestine.[17] KI6 is commonly seen in constipation protocols because it stimulates moistening of the lower *jiao* and is the best point to tonify Kidney yin.[12] The effect of this combination of points is summarised in Table 1.

METHODOLOGY

The intervention consisted of one acupuncture treatment per week performed over an eight-week period. Hwato brand

TABLE 1 Patient progress chart

Treatment	Cascara tablets per day	Bowel movements per day	Abdominal distension and discomfort	Stool formation	Neck pain (1–10)	Headache/ eye pain (1–10)	Lower back pain (1–10)	Points selected
Treatment 1	3	3	Twisting sensation, distension and discomfort	Hard, dry, pebble-like, unsatisfying to pass	7/10	5/10	5/10	ST25, BL25, TE6, KI6, LI4, LU7, *Ashi* points, BL23, BL40
Treatment 2	3	3	Decreased sensation of discomfort and distension	Hard, dry, pebble-like	5/10	0/10	3/10	As per treatment 1
Treatment 3	1	1–2	Further decrease in discomfort and distension	Improved, but still hard and dry	3/10	0/10	2/10	As per treatment 1
Treatment 4	1	1–2	No distension or discomfort	Softer, more wholly formed	2/10	0/10	1/10	As per treatment 1, with the addition of needle head moxa on ST36
Treatment 5	1 every 2 days	1–2	Nil	Softer again, more wholly formed	1/10	Improved eyesight reported by optometrist	0/10	As per treatment 4
Treatment 6	1 every 2 days	1–2	Nil	Firm, soft and contiguous	1/10	0/10	0/10	As per treatment 4
Treatment 7	0	1–2	Nil	Firm, soft and contiguous	1/10	0/10	0/10	As per treatment 4, minus TE6
Treatment 8	0	1–2	Nil	Firm, soft and contiguous	1/10	0/10	0/10	As per treatment 7, minus ST25

stainless steel needles were used (0.25 mm in diameter and 30 mm in length). The needles were inserted bilaterally and retained for an average of 15 to 20 minutes. The formulation of point selection by the author in consultation with the co-author conformed to protocols established in modern TCM literature.[6-9] Palpation of the injured area enabled selection of *Ashi* points of the neck. The most painful points were treated using a non-retaining needling technique.[18] Needle insertion for each point was performed to a depth recommended by conventional TCM textbooks.[6,19] Research studies have shown that some points have a proven efficacy when needled to a specified depth. For instance, ST 25 *Tianshu* effectively treats all types of constipation when needled to a depth of 1–1.5 cun.[20] Needles were stimulated until *deqi* was elicited. The patient reported no adverse events during or after treatment.

CONCURRENT TREATMENTS

As the patient was self-prescribing the herbal laxative Cascara, the author asked her to reduce its intake to one tablet per day. This diminished regime lasted for two weeks before the patient reduced her intake to one tablet every two days. After another two weeks, the patient ceased taking Cascara altogether. The initial reduction of Cascara had the immediate effect of restricting the patient's bowel movements to one to two movements per day. This frequency continued until the end of the treatment course. As the defecation frequency decreased, her stool formation and abdominal discomfort rapidly improved. No headaches occurred after the first treatment. Following the third treatment, the patient reported no abdominal distension or discomfort. After the fourth treatment, her stools were soft, well formed and generally satisfying to pass.

When the patient visited her optometrist following the fourth treatment, he was surprised to find that her eyesight had improved. By the fifth treatment the patient no longer experienced lower back pain and her six-decade-old neck pain had stabilised to a level of one out of ten, with a 20% overall increase in ROM. The patient felt less internal heat and was now sleeping with a quilt. Her eyes showed greater brightness and her face was much more vibrant. In the final two treatments, she reported experiencing an excess of energy that 'she did not know what to do with'.

As shown in Table 1, this across-the-board improvement occurred without any major modification to the point prescription selected for the first treatment. After four treatments, ST 36 *Zusanli* was added to the protocol to strengthen qi, build blood and bring balance to a treatment that had been primarily dispersing in nature. After the sixth treatment, points were gradually subtracted from the prescription, as the patient's symptoms of constipation no longer persisted. After eight treatments both the patient and author were satisfied that further treatment was no longer necessary.

Clinical Commentary

This case report will be of interest to the many TCM practitioners who see patients with chronic constipation. Constipation is a common disorder that affects more than one in ten Australians. Patients with chronic constipation are often prescribed purgatives to stimulate bowel function, but long term use may produce harmful side effects. The acupuncture treatment described in this report effectively resolved a fifteen-year-old case of normal transit constipation and provided a safe alternative to long-term purgative use. Secondary symptoms of neck pain, back pain and headache were also successfully treated. These results were obtained using simple yet effective acupuncture protocols that may be employed by any TCM practitioner.

Discussion

The outcome of this intervention indicates the systemic value and usefulness of acupuncture for the treatment of normal transit constipation in older patients. It highlights how the systematic approach of TCM diagnosis can enable a practitioner to identify salient information from a complex clinical presentation to form an appropriate treatment response. By employing a number of simple, well-established point formulae over eight weeks, acupuncture was effective in treating the patient's chronic constipation, neck pain, lower back pain and headaches.

The combination of three major changes implemented during the treatment course may have contributed to the remarkable improvement in the patient's constipation and associated symptoms. The first related to a revised pattern diagnosis that shifted the focus of the intervention from a root treatment of Liver qi attacks Spleen, to a root and branch treatment of Large Intestine stagnation and Kidney yin deficiency. The second involved the withdrawal of Cascara from the patient's medication regime, which allowed acupuncture to regulate stool consistency and defecation frequency. The third change came after the patient increased the number of meals consumed to three per day, providing the Spleen with more nourishment and the Large Intestine with more substance to discharge.

Three months after the final recorded treatment, the patient returned to the student clinic to report that she continued to be untroubled by any symptoms of constipation and improvement

was maintained for each of her chronic conditions. This patient was constipated and sought treatment for 15 years. Therefore, the number of weeks it took to rectify the problem is small in comparison.

In conclusion, there is currently a paucity of research that examines the effectiveness of acupuncture for normal transit constipation. The successful application of acupuncture in this case study suggests that such research is needed, as it is an area where acupuncture can establish itself as a safe, effective and inexpensive treatment option. In this patient's case, a number of conditions were treated successfully. Therefore it can be posited that acupuncture is a versatile modality that may improve the quality of life of chronic constipation sufferers in a short time.

References

1. Lembo A, Camilleri M. Chronic constipation. N Engl J Med 2003;349(14):1360–8.
2. Peppas G, Alexiou VG, Mourtzoukou E, Falagas ME. Epidemiology of constipation in Europe and Oceania: a systematic review. BMC Gastroenterol [serial online]. February 2008 [cited 27 May 2008]. Available from: BioMed Central, http://www.biomedcentral.com/content/pdf/1471-230X-8-5.pdf.
3. Choung RS, Locke GR, Schleck CD, Zinsmeister AR, Talley NJ. Cumulative incidence of chronic constipation: a population-based study 1988–2003. Constipation Research Today [serial online]. November 2007 [cited 27 May 2008]. Available from: http://constipation.researchtoday.net/archive/4/11/166.htm.
4. McCrea GL, Miaskowski C, Stotts NA, Macera L, Varma MG. Pathophysiology of constipation in the older adult. World J Gastroenterol 2008;14(17):2631–8.
5. Zhao H, Liu JP, Liu ZS, Peng WN. Acupuncture for chronic constipation. Cochrane Database Syst Rev 2008(4).
6. Shanghai College of Traditional Medicine. Acupuncture: a comprehensive text. O'Connor J, Bensky D, editors and translators. Seattle: Eastland Press; 1981.
7. Ellis A, Wiseman N. Fundamentals of Chinese medicine. Brookline, MA: Paradigm Publications; 1996.
8. Shi A. Internal medicine. Lin SS, Caldwell L, editors. Walnut, CA: Bridge Publishing Group; 2003.
9. Xinnong C, editor. Chinese acupuncture and moxibustion. Rev ed. Beijing: Foreign Language Press; 1999.
10. RxList. Cascara. RxList Herbal FAQ [online]. 1999 [cited 18 March 2008]. Available from: http://www.rxlist.com/cgi/alt/cascara_faq.htm.
11. Mills S, Bone K. The essential guide to herbal safety. New York: Elsevier; 2005.
12. Maciocia G. The foundations of Chinese medicine. Edinburgh: Churchill Livingstone; 1989.
13. Pitchford P. Healing with whole foods: oriental traditions and modern nutrition. Berkeley, CA: North Atlantic Books; 1993.
14. Maciocia G. Diagnosis in Chinese medicine. Edinburgh: Elsevier; 2004.
15. Kumar P, Clark M. Clinical medicine. Edinburgh: Elsevier; 2005.
16. Lembo A. Chronic constipation. Gastroenterol Hepatol Annu Rev 2006;1:55–61.
17. Deadman P, Al-Khafaji M. A manual of acupuncture [CD-ROM]. East Sussex: Journal of Chinese Medicine Publications; 2000.
18. Legge, D. Close to the bone, 2nd ed. Woy Woy, NSW: Sydney College Press; 1997.
19. Ellis A, Wiseman N, Boss K. Fundamentals of Chinese acupuncture. Taos, NM: Paradigm Publications; 2004.
20. Cui S. Clinical application of acupoint tianshu. J Tradit Chin Med 1992;12(1):52–4.

Current Research and Clinical Applications

Acupuncture as an Adjunct Treatment at the Time of Embryo Transfer: A Review of the Current Systematic Reviews

Caroline A Smith PhD
CompleMed, University of Western Sydney, Australia

Assisted reproductive technology (ART) is now an accepted and effective treatment for infertility. During 2004, there were 41 904 ART cycles in Australia, this resulted in 8794 pregnancies and 6792 live deliveries.[1] The relatively low rate of pregnancy success in IVF treatment is largely the consequence of implantation failure, and implantation remains a critical factor in limiting the success with ART. Over the last 10 years, research and improvements to treatment have aimed to increase success rates through the improvement of embryo quality, and improving the uterine environment to assist with embryo implantation.

The use of acupuncture as an adjunct to ART has grown in popularity over recent years, and this has most likely been in response to a number of randomised controlled trials showing an improvement in clinical pregnancies and live births. There are now at least thirteen clinical trials of acupuncture administered prior to egg retrieval and eight trials undertaken to coincide with an embryo transfer.

Many of the clinical trials administered as an adjunct to embryo transfer have used a very similar treatment protocol initially reported by Paulus et al.,[2] but may have used different design for the control group. The majority of the randomised controlled trials have reported positive results, whilst others report no statistical difference between study groups. To assist with keeping up to date with the growing evidence from trial data in this area of research, systematic reviews have been published.

A systematic review is a review of the literature that pre-specifies a research question, uses predefined and explicit methods to identify and select the research articles relevant to the question, and applies a pre-established set of criteria to critique the included studies. A meta-analysis includes a pooled statistical analysis of a subset of the included studies that are of a particular study quality and similar design.[3] Although systematic reviews are the best tool to summarise the evidence of a specific question, there are limitations to these tools. It is these limitations that explain why two systematic reviews may report different results and conclusions. The search strategy and evaluation criteria are based on subjective decisions and judgments. As Linde, Hammerschlag and Lao point out, changing the criteria for inclusion in the review can change the number of studies included, the use of the statistical methods and, consequently, the results of the meta-analysis.[3]

What is the evidence from recent systematic reviews of acupuncture as an adjunct to in-vitro fertilisation?

MANHEIMER ET AL.[4]

This systematic review evaluated whether acupuncture improved rates of pregnancy and live births when used as an adjunct treatment to embryo transfer in women undergoing IVF. The authors pre-defined eligible studies as needle acupuncture, randomised controlled trials administered within one day of embryo transfer, compared with sham acupuncture, or no adjunctive treatment, with outcomes of at least one clinical pregnancy, on-going pregnancy, or live birth. Each trial was assessed in a standard way. Most were judged to be satisfactory relating to the risk of bias. The results of the review and meta-analysis were based on seven trials with 1366 women receiving needle acupuncture only. In all the trials women received acupuncture immediately before and after embryo transfer, although two trials included additional treatments at different times during the IVF cycle. The treatment protocol was based on the initial Paulus trial in all but one trial. The methodological assessment described the trials as sound, and the minor concerns were not expected to result in substantial risk of bias.

The review reported on odds ratios for trials using sham and no treatment designs separately and all trials together. Irrespective of the control group design, acupuncture showed a benefit over the control with increasing the pregnancy and live birth rates. Overall, the findings for clinical pregnancy rate were an odds ratio (OR) of 1.65, and 95% confidence interval (CI) of 1.27 to 2.14; for ongoing pregnancy, OR 1.87, and 95%CI 1.4 to 2.49; and for live birth, OR 1.91, and 95%CI 1.39 to 2.64. The authors concluded there is preliminary evidence that needle acupuncture given with embryo transfer improves rates of pregnancy and live births among women undergoing IVF.

EL-TOUKHY ET AL.[5]

A few months ago there was much media interest in a second systematic review published on the effects of acupuncture in IVF. This systematic review included trials of acupuncture conducted during IVF. Their search was comprehensive, resulting in the inclusion of thirteen trials and a total of 2500 women randomised to either acupuncture or a control group. Eight of these trials (1623 women) reported on acupuncture trials conducted around the time of embryo transfer. A meta-analysis of these trials reported no difference in the clinical pregnancy rate (RR 1.23, 95%CI 0.96 to 1.58). There was also no difference in the live birth rate (RR 1.34, 95%CI 0.85 to 2.11). The conclusion from the authors was that the current literature does not provide sufficient evidence that acupuncture administered as an adjunct treatment improves clinical and live birth rates.

CHEONG ET AL.[6]

The Cochrane systematic review on the use of acupuncture as an adjunct to IVF will be published soon. A summary of their forthcoming systematic review has been published in abstract form only following presentation at a conference. A comprehensive search of the English language and Chinese language literature was undertaken. Thirteen trials met the pre-specified criteria, ten were included and three excluded. They report that acupuncture on the day of embryo transfer improves the clinical pregnancy rate (OR 1.65, 95%CI 1.22 to 2.24) and ongoing pregnancy rate (OR 1.85, 95%CI 1.18 to 2.91). There was no difference in the miscarriage rate compared to controls. They concluded that acupuncture performed on the day of embryo transfer does increase the clinical pregnancy rate of IVF treatment. Further research is required.

Why are the findings from these systematic reviews different?

The Cheong systematic review has not been published in full at the time of this journal going to print; therefore, it is difficult to comment on their review and findings.[6] The following comments will be based on the two earlier systematic reviews.[4,5]

El-Toukhy and colleagues discuss the difference in their findings compared to the earlier published review.[4] They suggest the difference in findings and conclusion is due to two reasons. Firstly, an additional study was included in their review.[7] They also included data from all five arms of the study conducted by Benson, which included laser acupuncture.[8] Secondly, they comment that the methodological quality of the studies was uneven, that the study interventions differed, points used varied, inclusion criteria varied, differences were noted in the timing of the intervention, and the choice of the sham control differed.

A review of the El-Toukhy review[5] raises the question whether the Craig trial[7] should have been excluded from the meta-analysis. It meets the criteria for being included in the systematic review, but the Craig study had very different results from all the other trials,[7] therefore adding this study to the meta-analysis would increase the heterogeneity, and potential source of bias. There was also a very high pregnancy rate in the control group of the Craig study,[7] (much higher than in other trials included in the review) and this may partially explain the lower success rate in the acupuncture group compared with the IVF-only group. The acupuncture intervention in this study was different to other trials in that it was performed off the IVF site and involved a drive to and from the reproductive medicine site which may have involved additional stress to the women.

CONCLUSION

To conclude, new trials are published everyday which can make it hard to keep up to date with the current evidence. However, up-to-date systematic reviews can help practitioners, researchers and policy-makers keep abreast of the evidence in their area. It is not uncommon for different systematic reviews to reach different conclusions, and this is usually explained by different pre-specification of inclusion techniques, and different methods for assessing the quality of the trials and analysing the results. Currently there is no adequate instrument that assesses the quality of an acupuncture intervention in a systematic review. Indeed, inclusion of an instrument would be helpful for acupuncture practitioners and researchers with interpreting the evidence.

The research implications from both systematic reviews highlight the need for further high-quality randomised controlled trials. The clinical implications are that evidence to date suggests that acupuncture administered on the day of embryo transfer is a safe intervention. In the absence of a peer-reviewed published paper of the Craig study,[7] the evidence from two systematic reviews and meta-analyses[4,6] is that acupuncture performed on the day of embryo transfer increases clinical and pregnancy rates.

REFERENCES

1. Wang YA, Dean JH, Grayson N, Sullivan EA. Assisted reproduction technology in Australia and New Zealand 2004. Assisted

reproduction technology series. No. 10. Canberra: Australian Institute of Health and Welfare; 2006.

2. Paulus WE, Zhang M, Strehler E, El-Danasouri I, Sterzik K. Influence of acupuncture on the pregnancy rate in patients who undergo assisted reproduction therapy. Fertil Steril 2002;77(4):721–4.
3. Linde K, Hammerschlag R, Lao L. Evidence overviews: the role of systematic reviews and meta-analyses. In: MacPherson H, Hammerschlag R, Lewith G, Schnyer R, editors. Acupuncture research: strategies for establishing an evidence base. Philidelphia: Churchill Livingstone; 2007. p. 199–217.
4. Manheimer E, Zhang G, Udoff L, Haramati A, Langenberg P, Berman BM, et al. Effects of acupuncture on rates of pregnancy and live birth among women undergoing in vitro fertilisation: systematic review and meta-analysis. Br Med J 2008;336(7643):545–9.
5. El-Toukhy T, Sunkara SK, Khairy M, Dyer R, Khalaf Y, Coomarasamy A. A systematic review and meta-analysis of acupuncture in *in vitro* fertilisation. Br J Obstet Gynaecol 2008;115(10):1203–13.
6. Cheong Y, et al. Is acupuncture useful in assisted conception? Results of a meta-analysis. Abstract presented at the 24th Annual Conference of the European Society of Human Reproduction and Embryology (ESHRE); 6–9 July 2008; Barcelona, Spain.
7. Craig LB, Criniti AR, Hansen KR, Marshall LA, Soules MR. Acupuncture lowers pregnancy rates when performed before and after embryo transfer. Fertil Steril 2007;88(Suppl 1):S40.
8. Benson MR, Elkind-Hirsch KE, Theall A, Fong K, Hogan RB, Scott RT. Impact of acupuncture before and after embryo transfer on the outcome of in vitro fertilization cycles: a prospective single blind randomized study. Fertile Steril 2006;86(Suppl 1):S135.

Research Snapshots

John Deare MAppSc
AACMA Research Committee

Caroline Smith PhD
University of Western Sydney

ELECTROACUPUNCTURE REDUCES OPIOID-LIKE MEDICATION

BACKGROUND: The use of opioid-like medication (OLM) in chronic non-malignant pain has increased greatly in the last 10 years. Such medications are associated with high incidences of adverse effects and are not always effective.

OBJECTIVE: This study examined whether OLM consumption used for various types of chronic pain could be reduced using electroacupuncture (EA).

DESIGN/SETTING/SUBJECTS: This is a single-site, 20-week pilot, randomised, single blind, sham EA controlled study with 35 participants, who were assessed according to the Classification of Chronic Pain.

INTERVENTION: Participants were randomly allocated to receive either real EA (REA) or sham EA (SEA). Both groups received treatment twice weekly for six weeks with follow-up at week 20.

OUTCOME MEASURES: Primary measures were the dosage of OLM, type and incidence of related side effect, and pain intensity measured using visual analogue scales. Secondary measures were McGill Pain Questionnaire, Quality of Life and Beck Depression Inventory.

RESULTS: At week 8 in both groups OLM consumption was significantly reduced ($F(2,66) = 18.4$, $p < 0.001$), this reduction was 39% in the REA group and greater than 25% in the SEA. Over time the group difference was not statistically significant but showed a trend toward a more rapid reduction in OLM of the REA group ($F(2,66) = 3.0$, $p = 0.056$). Side effect incidents with OLM were reduced by 40% and 45% in the REA and SEA groups respectively.

CONCLUSION: In the short-term, this pilot study showed that EA could be an effective and safe approach to reduce opioid consumption and related OLM side effects.

Zheng Z, Guo RXJ, Helme RD, Muir A, Da Costa C, Xue CCL. The effect of electroacupuncture on opioid-like medication consumption by chronic pain patients: a pilot randomized controlled clinical trial. Eur J Pain 2008;12(5):671–6.

EDITOR'S NOTE: This study was partially funded by an AACMA research grant. A study with a large sample size has received an NHMRC project grant in 2009 and will be conducted in Melbourne in the next three years.

John Deare

fMRI CHANGES AND SALIVA PRODUCTION ASSOCIATED WITH ACUPUNCTURE

BACKGROUND: This study looked at the use of acupuncture on LI 2 *Erjian* to stimulate saliva and reduce xerostomia (dry mouth). The authors were interested in exploring the neuronal substrates in such responses.

METHODS: A randomised, single-blinded, sham acupuncture controlled study of 20 healthy volunteers who received either real or sham acupuncture in random order. Cortical regions that were activated or deactivated during the interventions were evaluated by functional magnetic resonance imaging (fMRI). Saliva production was also measured.

RESULTS: Unilateral manual acupuncture stimulation at LI 2 *Erjian*, a point commonly used in clinical practice to treat xerostomia, was associated with bilateral activation of the insula and adjacent operculum. Sham acupuncture at an adjacent site induced neither activation nor deactivation. Real acupuncture induced more saliva production than sham acupuncture.

CONCLUSION: Acupuncture at LI 2 *Erjian* was associated with neuronal activation that appears to be correlated to saliva production.

Deng G, Hou BL, Holodny AI, Cassileth BR. Functional magnetic resonance imaging (fMRI) changes and saliva production associated with acupuncture at LI-2 acupuncture point: a randomized controlled study. BMC Complement Altern Med 2008;8:37.

This paper is available free from BioMed Central: www.biomedcentral.com.

John Deare

ACUPUNCTURE FOR LOW BACK PAIN AND LOWER LIMB SYMPTOMS

BACKGROUND: This study investigated the clinical efficacy of acupuncture

for lumbar spinal canal stenosis and herniated lumbar disc. It also aimed to assess if such treatments increased the blood flow of the sciatic nerves in animals.

METHODS: This study was neither blinded nor randomised. In the clinical trial, patients with lumbar spinal canal stenosis or herniated lumbar disc were diagnosed using MRI, CT or X-ray. They were then divided into three treatment groups, (i) Ex-B2 *Jiaji* (at the disordered level), (ii) electroacupuncture (EA) on the pudendal nerve, and (iii) EA on the nerve root guided by X-ray fluoroscopy (which is similar to the technique of spinal nerve root block).

OUTCOMES: Primary outcome measurements were pain and dysaesthesia using visual analogue scale and continuous walking distance. In the animal study, sciatic nerve blood flow was measured with a laser-Doppler flowmeter before and during the three kinds of stimulation (manual acupuncture on lumbar muscle, EA on the pudendal nerve and EA on the sciatic nerve) in anaesthetised rats

RESULTS: For the clinical trial, approximately half of the patients who received Ex-B2 *Jiaji* experienced relief of the symptoms. EA on the pudendal nerve was effective for the symptoms that were not improved by manual acupuncture on Ex-B2 *Jiaji*. Considerable immediate and sustained relief was observed in patients who received EA at the nerve root.

For the animal study, increased blood flow in the sciatic nerve was observed in 56.9% of the trial with manual acupuncture, 100% with pudendal nerve EA stimulation and 100% with sciatic nerve EA stimulation. Sciatic nerve stimulation sustained the increase longer than pudendal nerve stimulation.

CONCLUSION: The authors hypothesised that in addition to its influence on the pain inhibitory system, EA stimulation also caused a transient change in sciatic nerve blood flow, including circulation to the cauda equine and nerve root.

Inoue M, Kitakoji H, Yano T, Ishizaki N, Itoi M, Katsumi Y. Acupuncture treatment for low back pain and lower limb symptoms – the relation between acupuncture or electroacupuncture stimulation and sciatic nerve blood flow. Evid Based Complement Alternat Med 2008;5(2):133–43.

This paper is available free from eCAM: http://ecam.oxfordjournals.org.

EDITOR'S NOTE: Direct EA on the nerve root or trunks is not recommended in general acupuncture practice. Please note that in the current study, EA on the nerve root was guided by X-ray fluoroscopy. The authors did not report any side effects. **We strongly advise our readers not to perform such treatments in their private clinics.**

John Deare

DOES ACUPUNCTURE USED IN NULLIPAROUS WOMEN REDUCE TIME FROM PRELABOUR RUPTURE OF MEMBRANES AT TERM TO ACTIVE PHASE OF LABOUR?

BACKGROUND: The aim of this study was to evaluate whether acupuncture influenced the onset of labour, and the need for induction among women with prelabour rupture of membranes (PROM) among nulliparous women.

METHODS: 106 women with PROM were randomised to acupuncture or the control group. The study outcomes were the time from PROM to the onset of active labour, the rate of induction after two days, and women's wellbeing.

RESULTS: There was no difference between groups from time of PROM to the active phase of labour, the need for induction, or in women's sense of wellbeing. No adverse effects were reported.

CONCLUSION: Acupuncture treatment used for nulliparous women with PROM showed no effect in reducing the time to active labour, or in reducing the rates of induction. There were no changes in women's sense of wellbeing, but the treatment was considered positively while women waited for labour to start.

Selmer-Olsen T, Lydersen S, Mørkved S. Does acupuncture used in nulliparous women reduce time from prelabour rupture of membranes at term to active phase of labour? A randomised controlled trial. Acta Obstet Gynecol Scand 2007;86(12):1447–52.

Caroline Smith

ACUPUNCTURE IMPROVES PREGNANCY AND BIRTH RATES

OBJECTIVES: This systematic review and meta-analysis evaluated whether acupuncture improves the rates of pregnancy and live birth when used as an adjunct treatment to embryo transfer among women undergoing an embryo transfer.

METHODS: Literature was searched from Medline, Cochrane Central, Embase and Chinese Biomedical Database. Studies included were randomised controlled trials that compared acupuncture administered within one day of embryo transfer with sham acupuncture, or no treatment, and which reported on the outcomes – clinical pregnancy, ongoing pregnancy or live birth rate. Two reviewers assessed the methodological quality of trials, and extracted trial data.

RESULTS: Seven trials were included with 1366 women. The trials used similar clinical treatment protocols. Studies using sham acupuncture and no adjunct treatment were analysed

together. The meta-analysis found the use of acupuncture was associated with a significant increase in the clinical pregnancy rate (odds ratio OR 1.65, 95%CI 1.27 to 2.14), the number needed to treat (NNT) with acupuncture to achieve an extra pregnancy was 10, an increase with ongoing pregnancy (OR 1.87, 95%CI 1.40 to 2.49), NNT 9, and an increase in live birth (OR 1.91, 95%CI 1.39 to 2.64), NNT 9 (4 trials). Pre-specified analysis of a subgroup of data restricted to three trials with the higher pregnancy rates in the control groups found a smaller non-significant benefit from acupuncture (OR 1.24, 95%CI 0.86 to 1.77) suggesting acupuncture was not as affective.

CONCLUSION: Current evidence suggests that acupuncture administered on the day of embryo transfer improves clinical pregnancy and live birth rates for women undergoing in-vitro fertilisation.

Manheimer E, Zhang G, Udoff L, Haramati A, Langenberg P, Berman BM, et al. Effects of acupuncture on rates of pregnancy and live birth among women undergoing in vitro fertilisation: systematic review and meta-analysis. Br Med J 2008;336(7643):545–9.

Caroline Smith

Book Reviews

The Business of Healing: A Guide to Practice Establishment and Practice Management for Non-Medical Healthcare Professionals

By Robert Medhurst
Medhurst, 2008 (2nd edition)
ISBN 9780958079815

This is the second edition of *The Business of Healing*, which has been updated and revised with an additional nine new chapters, broadly covering the details of running your own business.

The book's introduction starts off with three excellent questions: What makes a good practitioner? Why do you want to be a therapist? How do you stay in practice? This is followed by chapters on practice options, location consideration, your own clinic space, security, insurance, business structure, and business costs. Other chapters deal with being in associations, client interview forms, operational considerations, policies and procedures, reception techniques, dispensary management, employing staff, marketing, regulation, safety and hygiene, ethics and negligence, financial and business management, getting started, and, finally, an extensive section on resources.

The parts of this book that I liked were the inclusion of 'advantage and disadvantage' comments at the end of some chapters and the useful tips throughout the book. For example, not buying a cheap printer, which, we all know from experience, usually costs more in ink and wastes more paper. However, I would like to have seen a summary of advantages and disadvantages at the end of each chapter. For example, there are disadvantages to using trade/barter dollars. Trade/barter dollars are credits or points you get in return for consultations or product that you then exchange with other businesses within the barter system. However if your percentage of paying clients in this revenue stream becomes significant, you could face a cash flow issue as you will find that you cannot pay for stock from most suppliers in our industry or for your tax bill as they do not accept this currency. Another disadvantage not mentioned is about practising from home in the practice options section. In some cases, you will incur capital gains tax on the sale of your home if you claim certain expenses. One cannot overstate the importance of having a trained accountant and a good lawyer before signing or doing anything when going into business.

This book is clearly targeted towards naturopaths rather than acupuncturists and Chinese herbalists. This is reflected in the forms and examples of documents. For example, there is no costing for a herb dispensary when one practises Chinese herbal medicine. Another is that it does not have the details of the Chinese Medicine Registration Board of Victoria in the resources section and, in fact, makes no mention of the importance of this board if you wanted to practise acupuncture or Chinese medicine in Victoria. Finally, details of our profession and association (AACMA) have not been updated. For instance, the fact the profession has HICAPS and the *Australian Journal of Acupuncture and Chinese Medicine* (the only peer-reviewed journal for Chinese medicine in the southern hemisphere) are not mentioned.

In conclusion, it is a sad fact that teaching institutions do not have the time to devolve sufficient skills for new graduates who want to go into business for themselves. This helpful and easy-to-use book should go some of the way to assisting them to get started.

Reviewed by John Deare

Acupuncture Research: Strategies for Establishing an Evidence Base

Edited by Hugh MacPherson, Richard Hammerschlag, George Lewith and Rosa Schnyer
Churchill Livingstone, 2007
ISBN 9780443100291

This book provides a comprehensive synthesis of the state of acupuncture research, and aims to address the fundamental question posed by researchers and practitioners: how and why does acupuncture work? A broad range of research themes are explored in each chapter, and the final chapter proposes thoughts and ideas about the future of acupuncture research.

There is something for every acupuncturist in this book. For practitioners looking to improve their own clinical practice, examples of research are provided that may inspire you to contribute to patient-centred research. For students and educational institutions this book will provide a valuable resource. It will also encourage those interested in initiating a career in research. To the educationalist it offers practical examples and guidelines on how acupuncture schools can make a significant contribution to acupuncture research by undertaking important preliminary studies. To the experienced researcher the book provides a valuable resource, providing an overview of acupuncture research.

A workshop held in York in 2006 was attended by almost all the authors, and the ideas and the methods for each chapter were debated. Each chapter of the book is written by authors who have a long track record of making a contribution to the development of acupuncture research.

The initial chapters provide an important foundation for the book. A review of the history of acupuncture and acupuncture research highlights the importance of historical, cultural and linguistic issues of east Asian systems, and how the lack of consideration of applying these issues to Western research methods contributes to the methodological challenges faced by acupuncture researchers. The current Western emphasis on levels of evidence does not lend itself well to acupuncture and other complementary therapies. The evidence mosaic proposed by Fonnebo suggests a different prioritisation of research questions and activity, and this model influences the subsequent ordering of the book.

The following chapter examines patient-based research, focusing on patient patterns of use and the treatment experience of the patient. This thoughtful chapter identifies research gaps that need to be filled, an outline of research methods that can answer these questions, and plenty of references to articles providing examples of the qualitative and quantitative research methods that have been used. The chapter continues to explore research activity, focusing on measuring patient-centred outcomes, and an individualised approach to treatment. Plenty of examples of research tools currently available to measure the impact of treatment from the individual's perspective are provided. The chapter highlights the holistic nature of acupuncture treatment and how the appropriate use of research methodologies in this area can help us understand the complexity of the acupuncture consultation.

Three chapters focus on research methods to measure the effectiveness of acupuncture. The authors cover a range of research studies that facilitate measurement of the effect of acupuncture treatment in the clinical setting, through to pragmatic, exploratory and randomised controlled trials. An explanation of each method is clearly described. The place of efficacy trials is described. Potential sources of bias are explored, as is the role of appropriate controls. The authors raise the question of whether it is possible to fully control for placebo effects with the methods currently available. Final chapters are devoted to the role and place of systematic review and meta-analyses, and an overview of the research methods used to examine the physiological mechanisms and biological correlates of acupuncture. The challenges of acupuncture research are fully explored and the authors respond with suggestions for future directions.

The book led me to reflect on my own research strategies and how I can contribute to this body of knowledge; it enthused me to generate research ideas for students, practitioner research, student clinic, and my own research areas. This book offers the reader a comprehensive overview of acupuncture research, and will be a valuable resource for acupuncture researchers and inspired acupuncturists wanting to become involved in research.

Reviewed by Caroline Smith

WHO Standard Acupuncture Point Locations in the Western Pacific Region

World Health Organization, 2008
ISBN 9789290613831

In Sydney, during the month of May 2008, just prior to the commencement of the 5th Australasian Acupuncture and Chinese Medicine Annual Conference (AACMAC), there was the Australian launch of the World Health Organization document *WHO Standard Acupuncture Point Locations in the Western Pacific Region*. This book represents the consensus on the locations of the 360 acupoints that are located on the 14 main meridians. Over the period of five years, commencing in October 2003, experts from China, Japan and the Republic of Korea (and on occasions other countries, such as Australia, United Kingdom and United States of America) met on 11 serial occasions to present their ideas, debate and then finally agree on the location of most of the acupoints. Nevertheless six acupoint locations (LI19, LI20, PC8, PC9, GB30 and GV26) remained contentious and their alternative locations are given. The rationale for the project is highlighted in the foreword where 'the demand for standardization of acupuncture point locations for education, research and clinical practice' was seen as driving the process.

The 249-page hardcover text has three sections. The first section outlines the general guidelines for acupoint location. The measuring units and their application are discussed and tabled for different regions of the body. The anatomical landmark method, the proportional bone (skeletal) measurement system and the finger-cun measurement method are explained. The accompanying 24 line drawings support the text and allow the reader to visualise the concepts of measurement.

The second section, by far the largest, locates two acupoints per page. The acupoints are arranged by channel. Each point is given its acupoint number (e.g. LU4, the fourth point on the Lung meridian) according to the WHO document *Standard Acupuncture Nomenclature* (2nd ed),[1] as well as the Pinyin and then the traditional and simplified Chinese characters. Anatomical terminology is used to describe the location and the type of measurement system used, e.g. proportional bone or finger connotes are often annotated, facilitating the location process. Every acupoint is also given its own three-tone line drawing to visually orientate the reader to its location.

The final section (the annex) records the consultation meetings that took place. The temporary advisers from each country, observers and the deliberations that occurred are documented for each meeting. This text represents the first time that a transparent process of consensus was achieved by leading international experts in defining the location of the acupoints associated with the main channels.

REFERENCE

1. World Health Organization. Standard acupuncture nomenclature: a brief explanation of 361 classical acupuncture point names and their multilingual comparative list. 2nd ed. Manilla: World Health Organization, Regional Office for the Western Pacific; 1993.

Reviewed by Chris Zaslawski

Applied Channel Theory in Chinese Medicine

By Wang Ju-Yi and Jason Robertson
Eastland Press, 2008
ISBN 9780939616626

As an academic, I read most newly published texts on Chinese medicine. Some books re-format known material in a predictable manner and contribute very little to existing Chinese medicine knowledge in English. Some texts, on the other hand, endeavour to present new material in innovative and creative ways. *Applied Channel Theory in Chinese Medicine* is one such book. Highly readable, with a wealth of clinical knowledge borne out by decades of clinical experience from Dr Wang, this book is definitely worth reading. The book, which has been co-written by Jason Robertson, is based on his experiences in Beijing as an apprentice to Dr Wang Ju-Yi at his clinic, the Ping Xin Tang. While most of the ideas and discussion originate from Dr Wang, Robertson has done a superb job in translating and interpreting these ideas in a very scholarly and accurate manner. Robertson acts as a sounding board, asking for clarification and explanation of many concepts which required Dr Wang to make explicit his conceptual thinking. This was possible only because Robertson had Chinese language fluency and his own clinical experience from which to extend the discussion.

It is an advanced text that assumes the reader has an intimate understanding of the basic theory of Chinese medicine and acupuncture. The book has twenty chapters and five appendices and can be divided into three main sections. The first section (chapters 1–11) outlines the significance of the organ pairing in each of the six channels (*liu jing*). Here each channel level is interpreted in terms of organ function and its relationship to classical Chinese physiology. In order to elucidate some of these relationships, the authors have used analogies such as the 'boiling pot and steaming dumplings' metaphor to explain the concept. Interspersed are quotes from the *Su Wen*, *Ling Shu* and *Nanjing* to support their ideas. This section concludes with a chapter on the extraordinary vessels that again draws on classical medical concepts but also highlights their clinical relevance.

The second section moves away from the theoretical concepts to clinical practice whereby the 'applied' aspect of channel theory is addressed. Readers are guided through a series of chapters which document how to palpate channels, what changes might be felt and how this leads to treatment strategies. Chapters 15–17 explore the concept of an acupoint, and specific acupoint functions such as the five transport points (*wu shu xue*), source, cleft and collateral points. This is supported by chapters on classical needling techniques, their modern clinical interpretation and a very informative final chapter on acupoint pairing.

The third section is comprised of the five appendices. These focus on the physical pathways of the channels, an analysis of the sensory organs from a Chinese medical perspective, a further six selected case studies and their analysis, a summary of Dr Wang's experiences with observation of the body surface and palpation of alternative pulses, while the final appendix is a short discussion on the concepts concerning Attention Deficit Hyperactivity Disorder (ADHD).

There are ample line drawings used to effectively support the text and ideas developed during the course of reading. Judicious use has been made of Chinese characters and the corresponding Pinyin for specific technical terms, for those readers interested in terminological accuracy. In addition, there are the narrative sections, coloured pink, whereby numerous stories are related concerning Dr Wang's life as a clinician. These sections give a very personalised account of the development of many of Dr Wang's clinical theories. Also interspersed in the text are case studies that demonstrate the application of many of the theories espoused throughout the text. Finally, there are the question and answer sections in which Robertson asks for clarification of an interesting medical concept or idea. These sections I found most interesting and they emphasised Robertson's inquisitive and questioning nature. There is a 'notes' section related to each chapter and a point index as well as an extensive general index. Jason Robertson has done Western acupuncturists a great favour by working with and documenting his experiences in Beijing with Dr Wang.

Reviewed by Chris Zaslawski

Anatomical Illustration of Acupuncture Points

By Guo Chang-Qing, Hu Bo and Liu Nai-Gang
People's Medical Publishing House, 2008
ISBN 9787117089906

The two most important skills that students need to develop after learning acupuncture points (acupoints) are the ability to locate and needle acupoints accurately and safely; and to select acupoints according to their indications. A good textbook should at least cover these two items.

The earliest book in English that addressed these two areas was by Cheng,[1] published in China in 1987. The book was the main textbook for teaching acupuncture in China and in English-speaking countries for more than 10 years. It covered every aspect of acupuncture but did not provide detailed information for either of the two areas.

The current colour-printed, high-resolution book by Guo et al. (2008) is also published in China. Modern technology in imaging and printing has ensured that this book is a great improvement from Cheng. The book successfully addresses the first ability, which is often neither sufficiently discussed nor illustrated by other commonly referenced books.[2,3]

Guo and colleagues adopted a few strategies to ensure their success. The location of each acupoint is marked on colourful pictures of human models with clear surface anatomy. Furthermore, diagrams of regional anatomy are provided to illustrate the underlying structures. In order to show the depth of needling and its relevance to other structures, diagrams of the cross-sectional anatomy of most acupoints are also provided.

For example, the section of ST 36 *Zusanli* has two pictures and two diagrams. One picture shows its location in relation to ST 35 *Dubi* and ST 41 *Jiexi*, and the other how to locate the acupoint on the body. One diagram indicates that ST 36 is on m. tibialis anterior, and is anterior to m. peroneus longus. The other is a cross-sectional diagram showing that needling this point stimulates m. tibialis anterior and at a deeper level m. tibialis posterior. The peroneus profundus nerve is nearby. More importantly, the correct *deqi* sensation is described. For ST 36, it is 'a sensation radiating to the ankle and dorsum of the foot and toes'.

These strategies provide readers with a clear mental picture of the location and needling sensation of each acupoint. Similar strategies have been used by one early book;[4] however, Chen (1995) has no pictures and the diagrams are only in red and black.

Other strengths of the book are that all acupoints are written not only in Chinese characters, but also in Pinyin with tones marked so that one can correctly pronounce the names. It also has detailed descriptions of the dosage of moxibustion for each acupoint, regional anatomy, actions and indications. Indications are arranged in the form of systems as well as conditions. This addresses the second purpose that I mentioned at the start of this review.

The weakness of the book is a lack of the section 'Point Combinations' and relevant explanations that have been included in one other book.[2] Perhaps this is not the focus of the book. Readers also need to be aware that the code system does not always conform to WHO nomenclature. I hope, however, that the editors will address these weaknesses in future editions.

In summary, I highly recommend this book for all acupuncture students, practitioners and educators. There is no other book that has covered the location, anatomy and *deqi* sensation of each acupoint in such a detailed and illustrative manner.

REFERENCES

1. Cheng XN. Chinese acupuncture and moxibustion. Beijing: Foreign Languages Press. 1987.
2. Deadman P, Al-Khafaji M, Baker K. A manual of acupuncture. 2nd ed. East Sussex, UK: Journal of Chinese Medicine Publications; 2007.
3. Qiu ML. Chinese acupuncture and moxibustion. Edinburgh: Churchill Livingstone; 1993.
4. Chen E. Cross-sectional anatomy of acupoints. Edinburgh: Churchill Livingstone; 1995.

Reviewed by Zhen Zheng

International News

Progress in Clinical Studies on Acupuncture Therapy in China: A Summary of Research in the Last Ten Years

Liu Jun-ling, Wang Jun-ying and Zhu Bing
Department of Physiology, Institute of Acu-Moxibustion, China Academy of Chinese Medical Sciences, Beijing, China

ABSTRACT

In the present paper, the authors review recent progress in clinical acupuncture treatment of (1) apoplectic sequelae, (2) facial palsy, (3) diabetes mellitus and diabetic peripheral neuropathy, (4) depressive disorder, (5) digestive system conditions, (6) gynaecological disorders and (7) trigeminal neuralgia. Studies have shown that the best indications for acupuncture therapy are disorders of the nervous system and the musculoskeletal system, Bi syndrome (arthralgia), surgery-related disorders and digestive system disorders. However, systematic research on acupuncture indications is necessary.

KEYWORDS review, acupuncture therapy, acupuncture indications, clinical studies.

INTRODUCTION

Chinese acupuncture therapy, including acupuncture and moxibustion, has been used for the treatment of many types of disorders. In 1980, the World Health Organization (WHO) recommended 43 indications for acupuncture therapy.[1] Recently, a Chinese research group[2] reported that the spectrum of diseases that can be treated with acupuncture therapy comprises 16 major categories, such as conditions of the musculoskeletal system, nervous system, digestive system, cardiovascular system and genito-urinary system; and 461 disorders, such as pain of different origins, hypertension, chronic colitis, facial palsy, apoplectic sequelae, acute and chronic strain, cervical spondylotic syndrome, lumbar muscle strain, scapulohumeral periarthritis, osteoarthritis, rheumatoid arthritis, sciatica, herniated lumbar disc, tennis elbow, peritendonitis, fasciitis and synonitis. This group of researchers introduced a three-tier system to identify the effectiveness of acupuncture. The first class of disease spectrum refers to the conditions that can be greatly improved by acupuncture alone, such as facial palsy. The second class refers to those conditions for which the symptoms and/or signs can be improved rather than being eliminated completely by acupuncture, such as mild and moderate gastroptosis, hypertension and hyperglycaemia. The third class is those in which acupuncture is an adjunct therapy and can improve some of the symptoms. These conditions include atrophic gastritis and acute appendicitis.

To better assess the efficacy of acupuncture therapy in the treatment of common disorders, in recent years researchers[3,4] have introduced strict approaches and internationally accepted methodologies of evidence-based medicine to acupuncture clinical research. We have selected a few common conditions and summarise the research results of the last ten years in China.

1. APOPLECTIC SEQUELAE

Apoplectic sequelae are commonly treated with acupuncture in China.[5-8] Randomised controlled trials (RCTs)[9,10] show that acupuncture in combination with comprehensive rehabilitation training, such as limb-movement exercise and speech training, is effective in accelerating the improvement of stroke patients' functions, such as slurred speech, dyskinesia, urine retention, daily-life activity, nerve defect score and spasticity. The frequently used needling techniques are body acupuncture, scalp acupuncture and electroacupuncture (EA) in combination with functional exercises.

Acupuncture therapy needs to be applied as soon as the patient's condition is

stable. Stronger needling manipulation is preferred. Body acupoints used are GV 20 *Baihui*, GV 24 *Shenting*, LI 4 *Hegu*, PC 6 *Neiguan*, TE 5 *Waiguan*, GB 30 *Huantiao*, ST 36 *Zusanli*. Scalp acupuncture areas are MS 5 *Dingzhongxian*, MS 6 *Dingnie Qianxiexian*, MS 7 *Dingnie Houxiexian* and Speech Areas II and III. Animal studies have shown[11,12] that acupuncture could effectively improve microcirculation, lower blood viscosity and peripheral vascular resistance and cAMP/cGMP, reduce serum nitric oxide (NO), nitric oxide synthase (NOS), lipoperoxides (LPO) and malonaldehyde (MDA) contents, and raise serum superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px), as well as blood perfusion in the regional locus of the brain in stroke patients.

2. FACIAL PARALYSIS

RCTs[13] have shown that acupuncture was superior to medications, including prednisone, vitamin B1, vitamin B12 and dibazol, local muscular injection of vitamin B1 and vitamin B12 or oral administration of oryzanol, in restoring facial muscular function in patients with facial paralysis. A literature review[13] indicated that in the early period of facial palsy, the effect of filiform needle stimulation was superior to that of EA, whereas at the medium and late stages, the effect of EA was superior to that of filiform needling, or ginger-separated moxibustion. However, acupoint-injection of compound *Salvia miltiorrhiza* or compound *Folium Isatidis* and *Angelica* root injections were superior to filiform needling.

A multi-modality management plan[14-17] including filiform needle therapy, thermal needling, plum blossom needle tapping, infrared therapy TDP irradiation and cupping is often used in clinics. In addition, research shows that thread needling from ST 4 *Dicang* to ST 6 *Jiache*, from Ex-HN 17 *Qianzheng* to ST 7 *Xiaguan*, from LI 20 *Yingxiang* to SI 18 *Quanliao* plus bilateral LI 4 *Hegu* and moxibustion[18] or shallow needling[19] were better than routine needling at the facial points.

In summary, in the early period of attack, mild needling stimulation and shallow needling are highly recommended. Animal studies[20,21] demonstrated that acupuncture or EA induced an increase in local blood circulation, neurotrophin 3 (NT3), brain natriuretic factor (BNDF), nerve growth factor (NGF) levels, tyrosine kinase C (TrkC) mRNA and NGF mRNA expression, local receptor density and axon counter transport rate. All of these may contribute to the effect of acupuncture on the recovery of facial paralysis.

3. DIABETES MELLITUS AND DIABETIC PERIPHERAL NEUROPATHY

There have been many research reports on acupuncture treatment of diabetes mellitus (DM) and diabetic peripheral neuropathy (DPN) in recent years in China.[22,23] Acupuncture as an adjunct therapy is effective in lowering fasting blood sugar levels, improving DM patients' retinopathy, haemoglobin A1c (HbA1c), post-meal blood glucose 2h, diarrhoea, and diabetic neurogenic bladder. Among them, research on DPN is most commonly seen.[24] DPN is characterised by symmetrical sensory disturbance and dyskinesia in the four limbs, particularly the lower limbs. In the treatment of DPN,[25] approaches such as acupuncture, moxibustion, EA, point injection, scalp acupuncture, cutaneous needling and auricular acupressure are often used. Common acupoints used are LI 11 *Quchi*, PC 6 *Neiguan*, TE 5 *Waiguan*, ST 36 *Zusanli*, SP 6 *Sanyinjiao*, BL 40 *Weizhong*, KI 3 *Taixi*, *Ashi* points, BL 20 *Pishu*, BL 23 *Shenshu*, Ex-B 2 *Jiaji*, CV 4 *Guanyuan*, and *Yishu* (the pancreas *Shu*). After acupuncture, the indexes of blood rheology such as erythrocyte aggregation index (ηr) and haematocrit, erythrocyte index of rigidity (IR), triglycerides, total cholesterol (TC), whole blood viscosity, whole blood reduced viscosity, fibrinogen (FIB) and fasting blood glucose levels decrease; whereas the insulin secretion, glucose utilisation, and NO increase. These may contribute to its effect in improving DPN in diabetes mellitus patients.[25-27]

4. DEPRESSIVE DISORDER

Acupuncture therapy is effective for post-stroke depression[28] and major depression.[29] A systematic review of ancient and modern literature indicated that the commonly used acupoints were, in the order of frequency, those of the Heart meridian, Pericardium meridian, Bladder meridian, Governor Vessel, Conception Vessel, Spleen meridian and Stomach meridian, such as HT 7 *Shenmen*, HT 5 *Tongli*, HT 9 *Shaochong*, PC 7 *Daling*, PC 8 *Laogong*, PC 5 *Jianshi*, BL 15 *Xinshu*, GV 20 *Baihui*, GV 26 *Shuigou*, GV 11 *Shendao*, CV 12 *Zhongwan*, SP 4 *Gongsun*, KI 1 *Yongquan* and KI 2 *Rangu*. Body and auricular acupuncture, acupuncture combined with psychological therapy, EA combined with Western medicines, or EA alone have been studied.[30] In general, the effectiveness of acupuncture therapy is comparable to Western medication such as Deanxit and Amitriptyline, or Chinese medicines[31,32] in relieving symptoms of neurosis and increasing Hamilton Depression Rating Scale (HAMD) score. It has been reported[33] that scalp acupuncture could correct depression-induced increase of glucose metabolism level in the temporal lobe, occipital lobe and thalamus, and reverse its decrease in the parietal lobe of the patients with depression. After acupuncture plus antidepressants, IL21β, IL26, tumor necrosis factor (TNF) 2α, free thyroxine (FT4) levels decreased in comparison to patients without acupuncture treatment.[30] Acupuncture could also regulate the abnormal hypothalamus-pituitary axis, lowering plasma adrenocorticotrophic hormone (ACTH) and cortisol levels.[34,35]

5. DIGESTIVE SYSTEM

Frequently reported acupuncture

treatment for disorders of the digestive system include peptic gastric ulcer,[36] chronic superficial gastritis,[36] gastroptosis,[37] gastroduodenal ulcer,[38] functional dyspepsia,[39] chronic non-specific ulcerative colitis;[40] and vomiting and nausea induced by radiotherapy, chemotherapy and fibroscopy.[41] The commonly used therapies are auricular acupuncture, body acupuncture, point-injection, cupping and fire needle therapy. Acupoints used are CV12 *Zhongwan*, BL21 *Weishu*, BL17 *Geshu*, ST36 *Zusanli*, CV13 *Shangwan*, and BL20 *Pishu*. Most of these clinical studies are RCTs. Results displayed that acupuncture could effectively relieve epigastric pain, distension, fullness and poor appetite, and suppress secretion of gastric acid. Gastroscopic examination[42] showed that after acupuncture treatment, the area of ulcer surface in the stomach reduced. A combined therapy of acupuncture and TDP significantly increased plasma gastrin and substance P levels as well as the frequency and amplitude of post-meal electrogastrogram in peptic gastric ulcer patients.[43] In cancer patients receiving radio- and chemo-therapy, acupuncture worked well in relieving gastrointestinal reactions such as vomiting, nausea and poor appetite.[44]

6. GYNAECOLOGICAL DISORDERS

In the treatment of gynaecological disorders such as primary dysmenorrhoea,[45] chronic pelvic inflammation,[46] chronic inflammation in the appendage of the uterus,[47] functional uterine bleeding[48] and menopause syndrome,[49] the commonly used acupoints are CV4 *Guanyuan*, ST36 *Zusanli*, ST29 *Guilai*, CV3 *Zhongji*, SP6 *Sanyinjiao*, Ex-CA1 *Zigong*, SP10 *Xuehai*, LR3 *Taichong*, BL18 *Ganshu* and BL23 *Shenshu*. Some reports involved foot massage,[50] body acupuncture combined with ultrashort wave therapy[47] and oral administration of Chinese medical herbs.[48,51] Acupuncture therapy has been found to regulate the hypothalamic-pituitary-ovary axis, normalise secretion of follicle-stimulating hormone (FSH), luteotrophic hormone (LH), estradiol (E2) and progestational hormone levels; and improve ovary function and raise the vaginal epithelial cell maturation index.[52,53] Hence, the resultant improvement of endocrine function may be responsible for the effects of acupuncture for gynaecological conditions.

7. TRIGEMINAL NEURALGIA

In the treatment of trigeminal neuralgia,[54,55] the local acupoints such as ST7 *Xiaguan*, SI19 *Tinggong*, TE17 *Yifeng*, Ex-HN5 *Taiyang* and GB14 *Yangbai* are often selected in combination with distant acupoints including LI4 *Hegu*, LI11 *Quchi* and ST36 *Zusanli*. BL2 *Cuanzhu*, Ex-HN4 *Yuyao* and ST7 *Xiaguan* are used for the first branch of the trigeminal nerve; ST2 *Sibai*, LI20 *Yingxiang* and GB29 *Juliao* for the second branch involved; and ST6 *Jiache*, ST4 *Dicang* and CV24 *Chengjiang* for the third branch.

Direct stimulation of the nerve trunk can often produce satisfactory immediate pain relief. It was reported that, after insertion of the needle, it was necessary to induce an electrical shock–like sensation. Most patients may have their pain relieved within about ten treatment sessions and the pain has usually disappeared in about one month. In addition, point-injection of lidocaine and the combined treatment of acupuncture and drugs are often used for chronic conditions.[56-58]

CONCLUDING REMARKS

Although many types of disorders are treated by acupuncture therapy, a bibliometric study[59] has shown that acupuncture therapy is more effective for disorders of the nervous system and musculoskeletal system, including traumatic injury, atrophic syndrome, Bi syndrome (arthralgia), digestive system (not including liver and gallbladder disorders) and post-operative conditions.

In recent years, the application of acupuncture therapy to the treatment of psychological diseases, endocrine-metabolic disorders and dermatological diseases presents a rising tendency. The application of acupuncture in the treatment of otorhinolaryngological disorders and gynaecological diseases is in a stable state in its use in China. The optimal protocol of acupuncture therapy needs to be assessed and identified for these conditions.

In addition, future clinical studies of acupuncture in China need to address current defects,[60,61] including (1) a lack of a long-term follow-up after treatment, (2) poor description of randomisation scheme, (3) lack of 'intention-to-treat' analysis, (4) lack of reliable and standard outcome assessments, and (5) small sample sizes in many RCTs.

REFERENCES

1. Xue LG. Indications of acupuncture and moxibustion therapy – 43 types of diseases recommended by WHO [in Chinese]. Beijing: China Metrology Publishing House; 1995.
   薛立功. 针灸临证指南---世界卫生组织推荐43种疾病. 北京: 中国计量出版社; 1995.
2. Du YH, Xiao YL. Preliminary study on clinical disease spectrum of modern acupuncture and moxibustion. Chin Acupunct Moxibustion 2002; 22(5):347–50.
   杜元灏, 肖延龄. 现代针灸临床病谱的初步探讨. 中国针灸 2002;22(5):347–50.
3. Li Y, Liang FR, Yu SG. Evidence-based medicine and evaluation of clinical effectiveness of acupuncture. Chin Acupunct Moxibustion 2003; 23(2):113–15.
   李瑛, 梁繁荣, 余曙光. 循证医学与针灸临床疗效评. 中国针灸 2003;23(2):113–15.
4. Liu F, Xu LF. Views on evidence-based medicine and clinical acupuncture-moxibustion research. Shanghai J Acupunct Moxibustion 2006;25(6):34–5.
   柳芳, 徐兰凤. 循证医学与针灸临床研究之我见. 上海针灸杂志 2006;25(6):34–5.
5. Yu FH, Ma SH, Zhang J. Clinical research on acupuncture treatment of

acute ischaemic stroke. Beijing J Trad Chin Med 2007;26(1):38–9.
于凤华，马淑华，张捷. 针刺法治疗急性缺血性中风的临床研究. 北京中医 2007;26(1):38–9.

6. Shi XM. Clinical research on treatment of 9005 cases of stroke by using 'Xingnao Kaiqiao' Needling. Guiding J Trad Chin Med Pharm 2005;11(1):3–5.
石学敏. "醒脑开窍"针刺法治疗中风病 9005 例临床研究. 中医药导报 2005;11(1):3–5.

7. Luo QP, Chang XR. Development in clinical researches on the treatment of apoplectic paralysis with acupuncture and rehabilitation training. Chin J Pract Chin Mod Med 2006;19(10):1104–8.
罗清平, 常小荣. 中风后偏瘫的针刺与康复治疗临床研究进展. 中华实用中西医杂志 2006;19(10): 1104–8.

8. Qian RY. Treatment of 120 cases of apoplectic supranuclear paralysis using acupuncture therapy for 'Kaiqiao-Liyan'. Res Trad Chin Med 2008;21(2):58–9.
钱仁义. 开窍利咽针刺疗法治疗中风假性球麻痹 120 例. 中医研究 2008;21(2):58–9

9. Wang Q, Jia C, Jiang GM. Clinical observation on the treatment of apoplectic sequelae with acupuncture in combination of rehabilitation therapy. Chin J Integr Med Cardio Cerebrovas Dis 2005;3(4):315–16.
王倩, 贾超, 姜桂美. 针刺配合康复疗法治疗中风后遗症临床观察. 中西医结合心脑血管病杂志 2005;3(4):315–16.

10. Liu LA, Guo RY, Feng SM, Li XZ, Dai SQ, Li Xy, Su L, Sun W, Zhang GP. Clinical study on the treatment of apoplectic aphasia at the early stage by using acupuncture plus speech training. Arch Trad Chin Med 2006;24(2):56–60.
刘立安, 郭瑞友, 逄世敏, 李秀珍, 戴淑青, 李晓昱, 苏 莉, 孙 炜, 张国平. 针刺结合语言训练治疗中风早期失语症的临床研究. 中医药学刊 2006;24(2):56–60.

11. Chi XL, Li ZG, Guo ZR, Zhou L, Man HH, Dong CY, Bi KP. Progress of studies on the mechanism of acupuncture treatment of acute ischaemic cerebral stroke. Acupunct Res 2007;32(4):285–8.
迟相林, 李振光, 郭兆荣, 周丽, 蔺红好, 董春玉, 毕可萍. 针刺治疗急性缺血性脑卒中的机制研究进展. 针刺研究 2007;32(4):285–8.

12. Qin LH. Overview on scalp-acupuncture treatment of apoplectic hemiplegia and mechanism research. Chin J Inf Tradit Chin Med 2005;12(5):103–5
秦黎红. 头针治疗中风偏瘫临床与机理研究概况. 中国中医药信息杂志 2005;12(5):103–5.

13. Liang FR , Li Y, Yu SG , Li CD , Hu LX, Zhou D , Yuan XL , Li Yi , Wang YJ. A multicentral randomized control study on clinical acupuncture treatment of Bell's palsy. 中医杂志 (英文版) J Trad Chin Med 2006;26(1):3–7.

14. Li Y, Liang FR, Fu Y, Zhu MJ. Common treatment approaches of facial palsy with acu-moxibustion and the evaluation on needling. Shanghai J Acupunct Moxibustion 2002;21(3):43–5.
李瑛,梁繁荣,付弋,朱曼佳.针灸治疗面瘫临床常用治法与刺法的评价. 上海针灸杂志 2002;21(3):43–5.

15. Wu QF. Overview on the treatment of facial palsy with specific needling. J Clin Acupunct Moxibustion 1995;11(10):50–2.
吴奇方. 特殊针法治疗面瘫概况. 针灸临床杂志 1995;11(10):50–2.

16. Ju RQ, Su LQ, Sun Y, Zhang JR, Liu SC. Clinical analysis on integrated treatment of 2240 cases of peripheral facial paralysis by stages in plateau region. World J Acupunct Moxibustion. 世界针灸杂志 (英文版) 2005;15(3):23–7, 31.

17. Qiu XH, Xie XK, Xie K. Point-through-point acupuncture for treatment of peripheral facial paralysis. Chin Acupunct Moxibustion 2006;26(4):287–9.
邱晓虎, 谢晓焜, 谢昆. 透刺治疗周围性面神经麻痹. 中国针灸 2006;26(4):287–9.

18. Chen QQ. Comparative observation on some factors affecting acupuncture treatment of peripheral facial palsy. Shanghai J Acupunct Moxibustion 2007;26(1):16–7.
陈清清. 影响针刺治疗周围性面瘫若干因素的临床对比观察. 上海针灸杂志 2007;26(1):16–7.

19. Liu Y, Dong GR. The clinical and experience studies on treatment of peripheral facial paralysis by acupuncture with shallow needling in different stages [PhD thesis]. Heilongjiang University of Chinese Medicine; 2005.
刘洋, 东贵荣. 多针浅刺分期治疗周围性面瘫的临床与实验研究. 中国博士学位论文全文数据库. 黑龙江中医药大学; 2005.

20. Sun ZR, Wei Y, Mei GH, Kou JY. Effects of electroacupuncture on the expression of BNDF mRNA in the nucleus of facial nerve in rabbits with peripheral facial nerve injury. Acupunct Res 2006;31(4):204–7.
孙忠人, 卫彦, 姜国华, 寇吉友. 电针刺激对周围性面神经损伤兔面神经核中 BDNF mRNA 表达的影响. 针刺研究 2006;31(4):204–7.

21. Ya ZM, Wang JH, Li ZY, Tan YW. Effects of acupuncturing on mRNA expression of NTFs in facial nerve nucleus following axonal injury. Chin Otorhinolaryngol J Integr Med 2001;9(5):209–11.
牙祖蒙,王建华,李忠禹,谭颖徽.面神经损伤后穴位电针刺激对面神经核中几种神经营养因子 mRNA 表达的影响. 中国中西医结合耳鼻咽喉科杂志 2001;9(5):209–11.

22. Guo YH, Guo Y. Advances in the study on acupuncture treatment of diabetic peripheral neuropathy. Acupunct Res 2003;28(2):157–62.
郭永红, 郭义. 针刺治疗糖尿病周围神经病变的研究进展. 针刺研究 2003;28(2):157–62.

23. Chen JF. Comments on the study of acupoint combination and remedies for treatment of diabetes mellitus with acupuncture and moxibustion. World J Acupunct Moxibustion 世界针灸杂志 (英文版) 2002;12(1):3–9.

24. Zhao JL, Li ZR. Clinical observation on mild-warm moxibustion for treatment of diabetic peripheral neuropathy. Chin Acupunct Moxibustion 2008;28(1):13–6.
赵建玲, 李忠仁. 温和灸治疗糖尿病周围神经病变临床观察. 中国针灸 2008;28(1):13–6.

25. Shi Y, Zhao JL. A review of clinic researches on the treatment of diabetic peripheral neuropathy by acupuncture and moxibustion in recent 10 years. Acupunct Res 2006;31(5):314–17.
石玥, 赵慧玲. 近 10 年来针灸治疗糖尿病周围神经病变临床应用概况及展望. 针刺研究 2006;31(5) :314–17.

26. Ding P, Kan JF, Ma YL. Application of acupuncture in treatment of diabetes mellitus type 2 caused peripheral neuropathy. Chin Folk Ther 2004;12(10):14–15.
丁萍, 谌剑飞, 马雅玲. 针刺治疗 2 型糖尿病周围神经病变. 中国民间疗法 2004;12(10):14–15.

27. Zhang YL, Cai SH, Li CP, Ma YL, Zhan JF. Clinical observation on relation of diabetic peripheral nervous lesion to hyperviscosity of blood in acupuncture treatment. Chin Acupunct Moxibustion 2000;20(9):553–4.
张艳玲, 蔡绍华, 李创鹏, 马雅玲, 谌剑飞. 针刺治疗糖尿病周围神

经病变与血瘀高凝状态关系的临床观察. 中国针灸 2000;20(9):553–4.

28. Wang CX. Overview on acupuncture treatment of apoplectic depression. J Emerg Trad Chin Med 2007;16(8):986–7.
王重新. 针刺治疗中风后抑郁症的临床研究概况. 中国中医急症 2007;16(8):986–7.

29. Li S. Overview about clinical studies on the therapeutic effect and the related factors in acupuncture treatment of depression in recent years. J Clin Acupunct Moxibustion 2007;23(3):53–4.
李世君. 近年针刺治疗郁证临床及相关因素研究的概况. 针灸临床杂志 2007;23(3):53–4.

30. Ma LP. Overview on acupuncture treatment of depression in recent years. Chin Acupunct Moxibustion 2006;26(Suppl):118–20.
马兰萍. 近年来针灸治疗抑郁症的概况. 中国针灸 2006;26(Suppl):118–20.

31. Wang L, Chi QB. Systematic evaluation on the randomized controlled trails of electroacupuncture treatment of depression. Shanghai J Acupunct Moxibustion 2008;27(3):36–8.
王珑, 迟庆滨. 电针治疗抑郁症随机对照试验的系统评价. 上海针灸杂志 2008;27(3):36–8.

32. Tang SX, Tang P, Xu ZH, Wang YB, Li FP. Observation on clinical therapeutic effect of acupuncture treatment of depressive neurosis. J Beijing Univ Trad Chin Med 2003;(01):35–6
唐胜修, 唐萍, 徐祖豪, 王玉保, 李凤萍. 针刺治疗抑郁性神经症 的临床疗效观察. 北京中医药大学学报 (中医临床版) 2003;(01):35–6.

33. Huang Y, Tang AW, Li QS, Li DJ, Xia DB, Chen J. Effect of scalp-acupuncture on cerebral function imaging in depression patients. Shanghai J Acupunct Moxibustion 2004;23(7):5–7.
黄泳, 唐安戊, 李求实, 李东江, 夏东斌, 陈静. 头电针对抑郁症脑功能成像的影响. 上海针灸杂志 2004;23(7):5–7.

34. Liu YZ. Advances in clinical treatment and mechanism studies of acupuncture treatment of depression. Shanghai J Acupunct Moxibustion 2008;27(3):48–50.
刘运珠. 针灸治疗抑郁症的临床与机理研究进展. 上海针灸杂志. 2008;27(3):48–50.

35. Xu H, Sun ZR, Li LP. Tong S, Wang S, Hua JS. Effect of acupuncture on depression and the patients' hypothalamus-pituitary-adrenal axis. Chin Acupunct Moxibustion 2004;24(2):78–80.
徐虹, 孙忠人, 李丽平, 佟帅, 王胜, 华金双. 针刺治疗抑郁症及其对患者下丘脑-垂体-肾上腺轴的影响. 中国针灸 2004;24(2):78–80.

36. Niu YH, Yang M, Qiang BQ, Guo QJ, Yang ZG. Acupuncture of Zhongwan (CV12) for digestive ulceration: a multi-centered, randomized and controlled study. Chin Acupunct Moxibustion 2007;27(2):89–92.
牛红月, 杨铭, 强宝全, 郭庆捷, 杨兆钢. 针刺中脘治疗消化性溃疡: 多中心随机对照研究. 中国针灸 2007;27(2):89–92.

37. Xin YH, Chen TF, Zhao NX. Clinical observation on combined treatment of chronic gastritis with acupuncture and Chinese herbal medicines. Mod Trad Chin Med 2005;25(4):57–8.
辛银虎, 程天凤, 赵宁侠. 针药结合治疗慢性胃炎 178 例临床观察. 现代中医药 2005;25(4):57–8.

38. Xu JY, Gao HY. Observation on the therapeutic effect of acupuncture treatment of 82 cases of gastroptosis. Forum Trad Chin Med 2005;20(3):24.
徐建勇, 高洪英. 针刺治疗胃下垂 82 例疗效观察. 国医论坛 2005;20(3):24.

39. Li JZ, Wei W. Treatment of 46 cases of digestive ulceration with acupuncture plus TDP irradiation and joint application of Chinese and Western medicines. J Ext Ther Trad Chin Med 2006;15(2):20–1.
李建忠, 魏巍. 针刺加 TDP 照射与中西药并用治疗消化性溃疡46例. 中医外治法杂志 2006;15(2):20–1.

40. Xie X, Zhu H, Wu X, Chen Q, Liang FR. Regularity of acupoint application in acupuncture and moxibustion clinical trials for functional dyspepsia. J Chengdu Univ Trad Chin Med 2008;31(1):1–4.
谢惺, 朱欢, 吴曦, 陈勤, 梁繁荣. 针灸治疗功能性消化不良临床对照文献用穴规律评析. 成都中医药大学学报 2008;31(1):1–4.

41. Lin HQ. Clinical research on acupuncture treatment of chronic superficial gastritis [PhD thesis]. Hubei College of Traditional Chinese Medicine; 2006.
林和清. 针刺治疗慢性浅表性胃炎临床研究. 中国优秀硕士学位论文全文数据库. 湖北中医学院; 2006.

42. Cui CB, Wang JJ, Wei ZX, Li X, Wu ZC. Clinical application of acupuncture in the treatment of side-effects of gastroscopy and development of studies on the regulative effect of acupuncture on gastrointestinal activities. Acupunct Res 2005;30(4):249–53.
崔承斌, 王京京, 魏正岫, 栗新, 吴中朝. 针灸治疗胃镜检查副反应的临床概况及针灸调节胃肠活动研究进展. 针刺研究 2005;30(4):249–53.

43. Yao XM, Yao SK. Effect of acupuncture on proximal gastric motility, visceral sensation, electrogastrogram and autonomic nerve in patients with functional dyspepsia [PhD thesis]. Hebei Medical University; 2007.
姚筱梅, 姚树坤, 针刺对功能性消化不良患者胃动力、内脏感觉、胃电图和自主神经功能的影响. 中国博士学位论文全文数据库. 河北医科大学; 2007.

44. Gu W. Progresses in the study on acupuncture relieving adverse effects of radiotherapy and chemotherapy for tumors. Med Recapitulate 2005;11(8):39–41.
谷巍. 针灸减轻肿瘤放疗化疗后不良反应研究进展. 医学综述 2005;11(8):39–41.

45. Chen B, Tu XH. Observation on the efficacy of acupuncture for treatment of primary dysmenorrhea. Shanghai J Acupunct Moxibustion 2008;27(6):15–16.
陈兵, 涂小华. 针刺治疗原发性痛经疗效观察. 上海针灸杂志 2008;27(6):15–16.

46. Ren HM, Zhou LL. 468 cases of chronic pelvic inflammatory disease treated by acupuncture and microwave heat irritation. J Ext Ther Trad Chin Med 2003;12(5):42.
任红梅, 周兰利. 针刺和微波热治疗慢性盆腔炎 468 例. 中医外治法杂志 2003;12(5):42.

47. Y AX, Liu JC. A summary of 56 cases of chronic appendagitis treated by acupuncture, moxibustion and ultrashort waves. Gansu J Trad Chin Med 2000;13(1):43.
岳爱霞, 刘加池. 针灸配合超短波治疗慢性附件炎 56 例小结. 甘肃中医 2000;13(1):43.

48. Bao DM. Combined treatment of 27 cases of functional uterine bleeding by acupuncture and medicines. Shanghai J Acupunct Moxibustion 2000;19(1):47–8.
包冬梅. 针药配合治疗功能性子宫出血 27 例. 上海针灸杂志 2000;19(1):47–8.

49. Wang Y. Acupuncture treatment of climacteric syndrome. Chin Manipul Qi

Gong Ther 2005;21(1):37.
汪胤. 针刺治疗更年期综合征. 按摩与导引 2005;21(1):37.

50. Xiao J. Clinical observation on 78 cases of dysmenorrhea treated by feet acupuncture combined with sole massage. J Clin Acupunct Moxibustion 2002;18(8):31.
肖劲. 足针疗法配合足底按摩治疗痛经 78 例临床观察. 针灸临床杂志 2002;18(8):31.

51. Xu GZ. Observation on the therapeutic effect of integrated medicine for metrorrhagia and metrostaxis. Chin Prim Health Care 2003;17(10):69.
徐桂芝. 中西医结合治疗崩漏的疗效观察. 中国初级卫生保健 2003;17(10):69.

52. Yu Q, Huang Y, Zhang HH, Lu SZ, Pan ML, Tu GC, Liu DG. Effect of acupuncture for tonifying and reducing Chong and Ren meridians on the functions of gynaecological endocrinal axis – a clinical report of 25 cases. Chin Acupunct Moxibustion 2001;21(3):169–71.
余谦, 黄泳, 张和媛, 路绍组, 潘美兰, 屠国春, 刘道国. 针刺调补冲任法对女性内分泌州功能的影响 – 附 25 例临床分析. 中国针灸 2001;21(3):169–71.

53. Yu L, Chao XM, Yu HB, Xu SJ, Pi M. Clinical observation on the regulation of female hormones by acupuncture combined with herbal medicines. J Clin Acupunct Moxibustion 2006;22(4):23–4.
余蕾, 曹雪梅, 于海波, 许爽君, 皮敏. 针药配合调节女性激素的临床观察. 针灸临床杂志 2006;22(4):23–4.

54. Yan HS, Hu A. Review on modern medical studies about acupuncture treatment of primary trigeminal neuralgia. Shanghai J Acupunct Moxibustion 2004;23(8):27–9.
闫怀士, 胡安. 针刺治疗原发性三叉神经痛现代医学研究综述. 上海针灸杂志 2004;23(8):27–9.

55. Huang XJ. GE Shuhan's experience on the treatment of trigeminal neuralgia – observation on clinical effect of 2656 cases. J Clin Acupunct Moxibustion 2000;16(1):5–6.
黄晓洁. 葛书翰治疗三叉神经痛经验 – 附 2656 例疗效观察. 针灸临床杂志 2000;16(1):5–6.

56. Tian LF. Overview on acupuncture treatment of trigeminal neuralgia. J Trad Chin Med 2008;49(2):176–9.
田丽芳. 针灸治疗三叉神经痛概况. 中医杂志 2008;49(2):176–9.

57. Li MP, Chen J, Yang YY, Gong Y Wang W. Clinical observation on 878 cases of primary trigeminal neuralgia treated mainly with tapping therapy. Chin Acupunct Moxibustion 2000;20(2):87–8.
李茂鹏, 陈军, 杨瑜瑛, 宫岩, 王伟. 叩刺为主治疗原发性三叉神经痛 878 例临床观察. 中国针灸 2000;20(2):87–8.

58. Li L, Sun ZR. Clinical effective evaluation of acupuncture combined with decoction in treating primary trigeminal neuralgia in blood stasis syndrome [Master's thesis]. Helongjiang University of Chinese Medicine; 2006.
李蕾, 孙忠人. 针药结合治疗血瘀型原发性三叉神经痛的临床疗效评价. 中国优秀硕士学位论文全文数据库. 黑龙江中医药大学; 2006.

59. Fei YD, Yang DQ, Hu LJ, Lu J, Tu Y. Bibliometrics study on dominant diseases in modern acupuncture clinic. Chin Acupunct Moxibustion 2007;27(3):229–33.
费宇彤, 杨德强, 胡凌娟, 卢峻, 图娅. 当代针刺临床优势病种的文献计量学研究. 中国针灸 2007;27(3):229–33.

60. Liang FR, Ren YL, Tang Y. Current situations about studies on the evaluation of clinical efficicacy of acupuncture. Acupunct Res 2008;33(1):62–4.
梁繁荣, 任玉兰, 唐勇. 针灸临床疗效评价研究. 针刺研究 2008;33(1):62–4.

61. Lao LX. Acupuncture clinical studies and evidence-based medicine – an update. Acupunt Res 2008;33(1):53–61.
劳力行. 针灸临床研究的现状及探讨. 针刺研究 2008;33(1):53–61.

2008 AACMA Research Grants Abstracts

The following abstracts comprise the successful applications for the 2008 AACMA Research Grants.

INVESTIGATION OF THE ANTICANCER EFFECTS AND THE MECHANISM OF ACTIONS OF EXTRACTS FROM CHINESE HERBAL MEDICINE FORMULAE ON PROLIFERATION OF HUMAN OVARIAN CANCER CELL LINES

Yuling Chen, Suilin Mo, Felix Wu Shun Wong and Daniel Man-yuen Sze
University of New South Wales
Award: $2500

BACKGROUND

The use of traditional Chinese medicine (TCM) as a complementary therapy is getting more and more popular in cancer management. In addition, for many years, there have been demands for scientific evidence to support the professional use of Chinese herbal medicine (CHM) in oncology. Our previous study showed that some CHM formulae have an anti-proliferative effect on human ovarian cancer cell lines. However, it is important to provide further evidence to allow in-depth understanding of the probable mechanisms of action, which will provide a better understanding of how CHM may work clinically in cancer treatment and, in this particular context, targeting gynaecological ovarian cancer.

AIMS

The specific aims of the study are:

1. To evaluate NO1013 Formula, Modified NO1013 Formula, and Erzhu Decoction for their anti-tumour activities, as shown by their abilities to inhibit the proliferation of ovarian cancer cell lines, leading to the induction of cancer cell apoptosis;
2. To determine the related mechanisms underlying proliferative inhibition and apoptotic actions of the CHM formulae.

METHODS

Effect of CHM formulae on proliferation of cancer cell lines

Drug-induced cell viability or proliferation effects will be measured by the commercially available CellTiter-Glo Luminescent Cell Viability Assay. By measuring cell ATP, this assay indicates the total 'live' cells in cancer cell lines.

Effect of CHM formulae inducing apoptosis of cancer cell line

After treatment with CHM formulae, a combination of Propidium Iodide staining and Annexin V binding (ANNEXIN V-FITC Apoptosis Detection Kit [BD Biosciences]) will be used to measure, by flow cytometry, for apoptotic cells versus cells dead by necrosis, following the manufacturer's instructions.

Effect of CHM formulae on the cell cycle arrest of ovarian cancer cell lines

After treatment with CHM formulae, cancer cells will be fixed with ethanol and stained with Propidium Iodide, then analysed by flow cytometry to determine the proportion of various fractions of cells in different cell cycle phases.

SIGNIFICANCE

This study will demonstrate the anti-cancer activity and the related mechanism of actions of the selected CHM formulae. With subsequent bioassay-guided fractionation and purification processes, we also aim at bioprospecting novel anti-cancer medicines derived from clinically used, evidence-based Chinese herbal medicine.

TRADITIONAL CHINESE MEDICINE DIAGNOSIS FOR PRE-DIABETES AND DEVELOPMENT OF A CHINESE MEDICINE ASSESSMENT MEASURE

Suzanne Grant and Emma Scully
University of Western Sydney
Award: $2000

BACKGROUND

Central to the practice of traditional Chinese medicine (TCM) is a unique diagnostic framework. TCM diagnosis is not well integrated into research and few formal attempts have been made to evaluate its validity and reliability. The Harvard Medical School Division for Complementary and Integrative Medical Therapies and the New England School of Acupuncture (NESA) in the United States have developed a structured assessment instrument: the Traditional East Asian Medicine Structured Interview, TCM version (TEAMS1-TCM).

AIM

The hypothesis is that this instrument will increase the inter-rate reliability of TCM diagnosis when used in clinical trials. The testing phase of this instrument is currently underway. In Australia, the TEAMS1-TCM instrument will be tested as part of a clinical trial being conducted by the University of Western Sydney to evaluate the effectiveness of a Chinese herbal formula in the treatment of pre-diabetes.

METHOD

Thirty participants with pre-diabetes will be interviewed separately by two TCM practitioners. The results will be compared and inter-rater reliability

assessed. TCM patterns of pre-diabetes will be identified. The interview forms will be evaluated for their capacity to collect sufficient data, whether they do so in a naturalistic manner, and how the experience of using the form differs from the training and experience of practitioners.

SIGNIFICANCE

These results will contribute significantly to the refinement of a valid instrument to enable the use TCM diagnosis in clinical trials.

A RANDOMISED TRIAL OF ELECTOACUPUNCTURE VERSUS SHAM ACUPUNCTURE AND NO ACUPUNCTURE FOR THE CONTROL OF ACUTE AND DELAYED CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING

Christopher McKeon, Kerry Reed and Janet Hardy
Mater Adult Hospital
Award: $2500

BACKGROUND

Chemotherapy-induced nausea and vomiting (CINV) continues to be a major concern for patients despite new and improved antiemetic therapy.[1] CINV can be described as acute, (in the first 24 hours) and/or delayed (from day 2 to day 5 post chemotherapy). In an observational study the incidence of post-chemotherapy nausea was 62% on days 1 to 5 post chemotherapy, 77% of patients suffered at least mild nausea.[1] Despite the advancements in antiemetic therapy, there still remain those who experience some form of CINV which impacts on their quality of life.[1]

Streitberger et al.[2] identified that a growing number of studies have shown the benefit of electroacupuncture for CINV. A systematic review by Ezzo et al.[3] as part of the Cochrane Collaborative Review recommended that, as most of the electroacupuncture (EA) studies did not use modern antiemetics, further studies need to be done with concurrent use of modern antiemetics. The review also noted that very few of the studies addressed the benefit of EA on delayed CINV.

AIM

The aim of the trial is to determine whether real EA, in addition to standard treatment, gives greater relief from CINV over the 7-day study period than sham EA or no acupuncture as measured by the Functional Living Index Emesis score.

METHODS

Patients with cancer admitted to the haematology/oncology day unit for moderate- to high-dose chemotherapy for their first cycle of chemotherapy will be recruited and randomly assigned into one of the three arms.

1. Treatment arm. Standard EA applied to ST36 *Zusanli*, PC6 *Neiguan*, LR3 *Taichong* and LI4 *Hegu* bilaterally, and *deqi* will be obtained. The frequency of stimulation will be 10 Hz and intensity of stimulation will be adjusted according to the patient's tolerance (maximum 10 mA). Stimulation will commence 10 minutes prior to chemotherapy starting and continue for a total of 30 minutes on the first cycle. Treatment will be given on day 1 and day 3.

2. Sham EA arm. Each point will be defined by the corresponding acupuncture points and measurements, i.e. 1 cun lateral to PC6 *Neiguan*, midpoint between ST36 *Zusanli* and GB34 *Yanglingquan*, 1 cun medial to LI4 *Hegu* and 1 cun lateral to LR3 *Taichong*. Once inserted, the needle will not be manipulated. The circuit will be set up in the same way as for the treatment arm. A non-functioning electroacupuncture machine will be used. Sham stimulation will be given in a similar manner as the real EA treatment.

3. No-acupuncture group. Patients in this group will receive standard antiemetic medication treatment without acupuncture.

Antiemetics

All patients will receive standard antiemetic therapy as per Mater Health Services protocols. All patients will receive rescue antiemetics, according to protocol if required.

Outcome measures

Instruments:

1. FLIE (Functional Living Index Emesis): The FLIE is a validated nausea- and vomiting-specific patient-reported outcome instrument that rates nausea and number of vomits and the impact of CINV on QoL (quality of life). QoL and the effects of CINV have been identified as impacting directly on the health care decision and continuation of treatment by patients.

2. Patient diary: Patients will be given a diary scoring daily nausea (using a 100 mm VAS scale), the number of vomits and use of rescue emetic medications for 7 days post chemotherapy.

Primary outcome measure:

- FLIE score at day 7 as compared to baseline.

Secondary outcome measures:

- FLIE score at day 3 compared to baseline;
- Number of vomits, days 1–6;
- Nausea score, days 1–6.

SIGNIFICANCE

CINV is still a major problem for cancer patients, even with the newer antiemetic regimes and drugs in use today. The significant aspects of the current study include:

- testing the benefit of EA as an adjuvant treatment for CINV;
- addressing the lack of evidence identified in the literature reviews; and
- providing support for the establishment of acupuncture as a service in the Mater Adult Hospital Cancer Service.

REFERENCES

1. Ballatori E, Roila F, Ruggeri B et al. The impact of chemotherapy-induced nausea and vomiting on health-related quality of life. Support Care Cancer 2007;15:179–85.
2. Streitberger K, Ezzo J, Schneider A. Acupuncture for nausea and vomiting: an update of clinical and experimental studies. Auton Neurosci 2006;129:107–17.
3. Ezzo J, Vickers A, Richardson MA et al. Acupuncture-point stimulation for chemotherapy-induced nausea and vomiting. J Clin Oncol 2005;23:7188–98.

COLLECTION OF DATA FROM A TCM QUESTIONNAIRE, PRACTITIONERS AND MEDS DEVICE: A PILOT TRIAL

Michael Popplewell, Chris Zaslawski, John Reizes and Narelle Smith
University of Technology, Sydney
Award: $1000

BACKGROUND

Many electrical devices have been purported to diagnose the condition of patients from a traditional Chinese medical (TCM) perspective with little published data to verify this assertion. Further, devices currently on the market have many flaws, thereby justifiably drawing criticism from the scientific community. The chief researcher, as part of his Master of Engineering Research (MER), constructed, validated and pilot-tested a device called the Meridian Electrical Data System (MEDS). This pilot study consisted of two-hourly data collections from 8 am to 6 pm from ten subjects. A particularly interesting observation was a diurnal variation in phase angle and impedance over time for each participant; unexpectedly, the subjects varied uniquely.

This pilot study and its interesting results led to a PhD at UTS. It was proposed that the diurnal variations observed in the Master's pilot may be the result of health disturbances in the subjects that could be identified by and correlated to TCM patterns. In any case, this observation warranted further investigation.

As a first step towards this goal, a questionnaire called the Diagnostic System of Oriental Medicine (DSOM) was identified as a tool to objectively diagnose subjects from a TCM perspective. The DSOM was developed and validated by Professor Lee in Korea. It was translated into English and an attempt to validate it was performed with five practitioners each interviewing 34 subjects at the UTS clinic late last year. We will now take the next step and investigate possible correlations between MEDS, practitioner diagnoses and DSOM data.

AIM

We propose to undertake a clinical study to evaluate data collected from MEDS, the DSOM and two practitioners' TCM diagnoses and attempt to find any relationships.

METHODS

Subjects and treatment

Subjects will be tested in groups of three or four per data collection day. This is to determine whether the diurnal variations observed in earlier research are due to a collective influence that affects everyone or are unique to each individual and therefore possibly due to TCM diagnostic factors. Data will be collected at 10 am, midday and 2 pm from each subject with the same protocol that was used during previous data collections with MEDS. In between data collections, the subjects will complete the DSOM questionnaire and be diagnosed by two experienced practitioners. Lunch will be provided; fluid intake and environment conditions such as temperature and humidity will be controlled. No treatment intervention will be provided to any conditions diagnosed. As a pilot, it is proposed to test ten daily groups, with at least one group tested on two consecutive days.

Outcome measures

The primary outcome measures include: correlation between datasets, which will indicate the agreement between practitioners, between practitioners and the DSOM, as well as between MEDS data and practitioners and DSOM; and using statistics such as Kappa statistics.

SIGNIFICANCE

The proposed pilot trial will be the first such project in the world in which objective and subjective TCM diagnoses are compared with a validated method of collection of electrical data from the meridian system of subjects. Should the results provide agreement between electrical data collected from the meridian system of a patient and TCM diagnoses, MEDS will then become a valuable diagnostic tool for TCM.

THE EFFECT OF ACUPUNCTURE ON OVARIAN BLOOD FLOW AND FOLLICULAR HEALTH AMONG 'IVF POOR RESPONDERS': A PILOT STUDY

Caroline Smith and Kelton Tremellen
University of Adelaide and REPROMED
Award: $5000

BACKGROUND

A poor response to ovarian stimulation is one complication of IVF, and is defined as failure of the development of sufficient number of mature follicles to proceed to ooycte retrieval, or the development of only a few oocytes following gonadotrophin stimulation. A poor response occurs in about 9–24% of women undergoing IVF.

According to Liang,[1] biomedical diagnoses of infertility can be viewed from TCM patterns. Poor follicle and/or egg quality can be viewed from a Kidney deficiency, with other B
lood or Qi imbalances. Women who respond poorly to ovarian stimulation in an IVF cycle have been shown to have compromised blood flow to their ovarian follicles when compared to women with

normal ovarian responses. The levels of vasoactive protein vascular endothelial growth factor (VEGF) in the follicular fluid of poor responders is higher than that of normal responders, and levels are inversely related to the subsequent embryo quality.

Research suggests acupuncture may exert a sympatho-inhibitory effect reducing uterine artery impedance and thereby increase uterine and ovarian blood flow. Acupuncture may therefore improve circulation to the ovary. Acupuncture has also been shown to modulate the production of angiogenic factors such as VEGF.

AIM

This pilot study will examine whether acupuncture can improve ovarian blood flow and follicular health among women with a poor response to IVF treatment.

METHODS

Study design Clinical trial with subjects acting as their own self control.

Eligibility: Women who have a poor ovarian response in IVF cycles.

The study will involve before and after testing, with women acting as their own control. Phase 1 will establish baseline measurements for the study outcomes, and phase 2 will involve the acupuncture intervention, followed by measurement of outcomes at ooycte retrieval. The diagnosis and treatment will follow an agreed algorithm. Three acupuncture treatments will be administered.

Primary endpoints

The effects of acupuncture on the follicle will be assessed by changes from baseline to egg retrieval, as measured by:

- peri-follicular blood flow;
- levels of follicular fluid VEGF;
- level of follicular fluid anti-mullerian hormone (AMH).

We intend to recruit 20 subjects. This study will provide preliminary data as to the effect of acupuncture on follicular health, and ovarian blood flow, and provide further evidence to the adjunctive role of acupuncture to assisted reproduction.

REFERENCES

1. Liang L. Acupuncture and IVF. Boulder, CO: Blue Poppy Press; 2003.
2. Battaglia C, Genazzani AD, Regnani G, Primavera MR, Petraglia F, Volpe A. Perifollicular Doppler flow and follicular fluid vascular endothelial growth factor concentrations in poor responders. Fertil Steril 2000;74(4):809–12.

BRAIN MAPPING OF CLINICAL ACUPUNCTURE EFFECTS WITH HIGH FIELD FUNCTIONAL MRI (fMRI)

Mark W Strudwick
Wesley Hospital
Award: $3000

INTRODUCTION

Carpal tunnel syndrome (CTS) is a common entrapment neuropathy, with variable response to treatment, often seen in acupuncture practice.[1-3] The acupoint PC7 *Daling*, at the midpoint of the transverse crease of the wrist, is commonly listed in treatment of CTS.[4-6] Conversely, another acupoint – ST36 *Zusanli* – has no reported efficacy in the treatment of CTS.

Does PC7 have only the reported local effects, or are there effects within the central nervous system (CNS) accounting for its effectiveness?

In past studies, the insula has shown graded responses both to pain stimuli and acupoint stimulation. Is similar activity involved in the pain-relieving qualities of PC7? Is insula activation specific to the pain relieving qualities of an acupoint, or merely an epiphenomenon of stimulation?

METHODS

In a pilot project, nine subjects (six male) with documented CTS were studied using fMRI to determine brain areas responding to point injection (PI) stimulation[7] of PC7 with a comparison being made to areas affected by similar stimulation of ST36 (used as a general analgesic point). Subjects were randomly allocated to one of two groups, one point being stimulated at the first session and the other four hours later. Subjective response was assessed by questionnaire before and after scanning; physiological response was measured immediately before and 20 minutes after stimulation, while continuous recordings were made of heart rate (HR) and intrapoint pressure at 2.5-second intervals throughout the experiment.

RESULTS

Repeated measures t-tests of mean heart rate (HR) and pressure-rate-product (PRP) before and after stimulation demonstrated a significant decrease in HR and PRP at PC7 and HR at ST36 – indicating an effect of stimulation (see Table 1). Results from the analysis of grouped imaging data with statistical parametric mapping ($p < 0.01$ uncorrected) are presented in Table 2. The results represent the signal positively correlated with the manometer pressure reading (increases) and negatively correlated with it (decreases). A decreased BOLD response was demonstrated in the insula cortex with increased response in the angular gyrus bilaterally with stimulation of PC7; while ST36 produced decreased response in the ipsilateral precuneus, supplementary motor area (SMA) and contralateral angular gyrus.

CONCLUSION

This pilot study demonstrated that an acupoint designated for the treatment of a specific disease induced a cerebral response pattern different from that of a non-treatment acupoint, measurable with fMRI. Further investigation of this is warranted on the basis that an increased understanding of these responses may lead to improved clinical outcomes.

TABLE 1 Physiological measurements: repeated measures t-tests, mean (SD)

Stimulation		N	Baseline	Endpoint	Paired difference	*p* (2-tailed)
PC7 *Daling*	HR*	9	78.1 (9.4)	73.0 (9.6)	5.1	<.001
	PRP#	9	10.39 (1.83)	9.61 (1.32)	0.78	.013
ST36 *Zusanli*	HR	9	75.4 (9.1)	70.4 (9.6)	5.0	.014
	PRP	9	9.72 (1.32)	9.26 (1.86)	0.46	NS

*HR = heart rate (beats/min); #PRP = pressure-rate-product

TABLE 2 Group activations

PC7 *Daling*				**ST36 *Zusanli***			
Label	MNI co-ordinates (mm)	Z	Activity	Label	MNI co-ordinates (mm)	Z	Activity
(c)* insula	-30 12 9	4.79	↓	(i) precuneus	9 -54 57	4.16	↓
(i)# insula	36 27 6	3.68	↓	(i) SMA	12 6 54	3.88	↓
(i) angular	39 -72 54	3.94	↑	(c) angular	-63 -42 36	3.79	↓
(c) angular	-48 -57 42	3.72	↑	(c) post cingulum	-15 -45 21	3.65	↑
(i) inferofrontal operculum	36 6 27	3.68	↓				

*(c) = contralateral; #(i) = ipsilateral

REFERENCES

1. Papanicolaou GD, McCabe SJ, Firrell J. The prevalence and characteristics of nerve compression symptoms in the general population. J Hand Surg (Am) 2001;26:460–6.
2. Kopell HP, Thompson WA. Peripheral entrapment neuropathies. Baltimore: Williams and Wilkins; 1963.
3. Axford J, editor. Medicine. Oxford: Blackwell; 1996.
4. O'Connor J, Bensky D, Shanghai Zhongyi xueyuan. Acupuncture: a comprehensive text. Chicago: Eastland Press; 1981.
5. The treatment of 100 common diseases by new acupuncture. Hong Kong: Medicine and Health Publishing Co; 1977.
6. Deadman P, Baker K, Al-Khafaji M. A manual of acupuncture. East Sussex, UK: Journal of Chinese Medicine Publications; 1998.
7. Strudwick MW, Hinks RC, Choy STB. Point injection as an alternative acupuncture technique – an exploratory study of responses in healthy subjects. Acupunct Med 2007;25(4):166–74.

ACUPUNCTURE AND MAJOR DEPRESSIVE DISORDER: IS PATTERN DIFFERENTIATION NECESSARY?

Kirk Wilson, Peter Meier, Carole Rogers and Ashley Craig
University of Technology, Sydney

Award: $1500

BACKGROUND

One in five Australians will experience depression at some time. This study tests the effectiveness of acupuncture as an adjunct therapy to Western medical drug therapy for depression. The study also aims to develop a more rigorous experimental design for acupuncture in depression trials than those noted in published literature.

METHOD

Subjects experiencing an episode of major depressive disorder according to the Diagnostic and Statistical Manual for Mental Disorders IV (DSM IV), currently taking Serotonin Selective Reuptake Inhibitors (SSRI) and diagnosed as having Liver qi stagnation according to Chinese medical theory are randomly assigned into a treatment group or wait-list control group. The acupuncture prescription has been standardised and twelve treatments are administered over eight weeks. Control subjects receive the same intervention as the treatment group at the conclusion of the wait period. The Beck Depression Inventory II, Hamilton Rating Scale for Depression, State-Trait Anxiety Inventory for Adults and Symptomatic Checklist-90R are administered before and after intervention and at an eight week post-treatment follow-up.

RESULTS

Interim results suggest that acupuncture may be an effective adjunct treatment to SSRI therapy. Average BDI scores suggest subjects are entering the study classified as severely depressed (average BDI score of 29.95), and score as mild to moderately depressed (average BDI scores of 14.5) after the acupuncture intervention. The wait-list control group shows no statistically significant change in the severity of their depression.

THE EFFECT OF ACUPUNCTURE COMPARED TO USUAL CARE ON STOPPING SMOKING IN ADULTS: A SINGLE-BLIND, RANDOMISED, CONTROLLED STUDY

Chris Zaslawski, Deirdre Cobbin and Jenny Head
University of Technology, Sydney

Award: $2500

INTRODUCTION

Smoking causes the deaths of approximately 19000 Australians per year. While Australian guidelines for smoking cessation advice recommend that, based on current evidence, acupuncture has little to offer, many

smokers continue to use complementary therapies such as acupuncture in their quest to quit smoking. The need for a well-designed controlled study is necessary to either confirm or refute the claim that acupuncture can significantly improve cessation rates in adults. This randomised, controlled, single-blind study uses established objective outcomes measures that include measurement of expired carbon monoxide and urine cotinine levels at 4, 8 and 26 weeks. In addition, it evaluates the participants' levels of cigarette craving, smoking urges, withdrawal symptoms, nicotine dependence and general wellbeing. The trial design has two parallel arms that uses an invasive sham acupuncture group (punctures the skin but not at acupoint sites) compared with a usual treatment group receiving counselling.

DESIGN

This is a single-blind, randomised, controlled trial on the effect of acupuncture in conjunction with advice on smoking cessation in adult smokers with three parallel arms (n = 201). Acupuncture (verum or invasive sham) will be given to two groups three times a week for four weeks and a continuous stimulation will be provided by use of a retained press needle on one of the ear acupoints. One group will receive 'Nicobate' nicotine replacement therapy patches. Smoking cessation advice (SCA) following Australian government guidelines will be given to all groups, as advice increases cessation and combining advice and other interventions improves outcomes.

The trial is applying the Russell standard at six months (RS6) for evaluating cessation by including biochemical measures of urine cotinine (a byproduct of nicotine excreted in the urine) and carbon monoxide readings (with the 'Smokerlyzer') as an independent confirmation of self reporting of smoking cessation at 6 months (RS6). Subjects who drop out are treated as intention-to-treat, and all subjects are followed up unless they die or become untraceable.

Outcome measures

The trial will use the 'Russell Standard' (RS), a gold standard for outcome criteria in smoking cessation trials.

Primary measure: Smoking cessation at week 26 as assessed by 'RS abstinence', defined as a self report of smoking not more than five cigarettes from the start of the abstinence period, supported by a negative biochemical test. Two biochemical tests will be used during the trial and at the endpoint of 26 weeks. At weeks 4, 8 and 26, the expired air carbon monoxide (CO) method will be used to detect recent smoking. A reading of 10 parts per million signifies smoking.

In addition, a urine cotinine analysis which is more sensitive and specific than CO will be taken at weeks 4, 8 and 26. A failed biochemical test classifies a participant as smoking, even when this is explained by the recent smoking of one to five cigarettes allowed throughout the follow-up period.

Secondary measures: A battery of questionnaires will be administered at baseline prior to the introduction of the intervention, and at weeks 4, 8 and 26. These instruments are:

- Fagerstrom nicotine dependence questionnaire;
- Shiffman-Jarvik smoking withdrawal questionnaire;
- Smoking Urges (brief) questionnaire;
- Post-treatment smoking cravings questionnaire;
- SF36 general wellbeing questionnaire.

EAR ACUPRESSURE FOR ALLERGIC RHINITIS: A RANDOMISED, SINGLE-BLINDED, SHAM-CONTROLLED, CLINICAL TRIAL

Claire Shuiqing Zhang, Angela Weihong Yang, Anthony Lin Zhang, Francis Thien, George Lewith, George Owe-Young and Charlie Changli Xue
RMIT University
Award: $2000

BACKGROUND

Allergic Rhinitis (AR), including seasonal allergic rhinitis or perennial allergic rhinitis, is a common condition which affects 10–40% of the population globally, and the prevalence has increased in the last few decades.[1] In Australia, AR is one of the most common long-term conditions and it affects about 16% of the population. AR may cause impairment of physical, emotional and social functions, and poor quality of life. The common management of AR includes avoidance of exposure to allergens, medication and immunotherapy. In recent years, there are more and more AR sufferers seeking complementary and alternative medicine for treating AR.[2] Ear acupressure is a non-invasive technique using pellets attached to auricular points to achieve therapeutic effects. It has been proved to be effective and safe for the management of AR by a number of clinical studies.[3-5] However, there is a lack of randomised controlled trials with rigorous methodology using ear acupressure to treat AR. This study is a randomised, single-blinded, sham-controlled, clinical trial to investigate the efficacy and safety of ear acupressure for the treatment of adults with AR.

METHODOLOGY

The trial will consist of a baseline period followed by a treatment period and a follow-up period. Participants will be randomly assigned into either real ear acupressure treatment or sham ear acupressure control group. The ear acupressure is achieved by using commercial stainless steel press-pellets. During the treatment, the participant will receive pellets taped on the real or sham ear points on one of the participant's ears. Outcome measures, including the severity of nasal symptoms and non-nasal symptoms, quality of life related to AR, participants' medication usage and medical expenses related to AR and participants' opinion about ear-acupressure, will be collected through participants' self-administered questionnaires.

SIGNIFICANCE OF THE STUDY

This study may provide evidence of ear-acupressure as an alternative therapy for the treatment of AR. It may contribute to the management of AR by providing data on symptomatic relief, improvement of AR sufferers' quality of life, and reduction of the use of Western drugs.

REFERENCES

1. Bousquet J, Khaltaev N, Cruz AA, Denburg J, Fokkens WJ, Togias A, et al. Allergic rhinitis and its impact on asthma (ARIA) 2008 update. Allergy 2008;63(Suppl 86):8–160.
2. Australian Institute of Health and Welfare. Australia's health 2006. Canberra: Australian Institute of Health and Welfare; 2006.
3. Kong X, Ren H, Lu M. A clinical study of ear-acupressure for allergic rhinitis 108 cases. World Health Digest 2006;3(8).
4. Wang W. A clinical study of ear-acupressure for allergic rhinitis 300 cases. Shanghai J Acupunct Moxibustion 2004; 23(6).
5. Zhu B, Zeng G. Ear-acupressure and Chinese herbal medicine for allergic rhinitis. J Chengdu Univ Trad Chin Med 2005;28(1).

EDITOR'S NOTE: Professor Xue has been researching Chinese medicine treatment for allergic rhinitis over the last 12 years. This year his research has received NHMRC support. An acupuncture trial for seasonal allergic rhinitis will be conducted in Melbourne in the coming three years.

COMBINED THERAPY OF ELECTROACUPUNCTURE AND COGNITIVE BEHAVIOURAL THERAPY FOR TENSION-TYPE HEADACHE: A RANDOMISED, CONTROLLED PILOT TRIAL

Zhen Zheng, Charlie Changli Xue and Ken Greenwood
RMIT University

Award: $3000

BACKGROUND

Tension-type headache (TTH) is described as pressing pain or tightness on both sides of the head with mild to moderate intensity, and it affects up to three-quarters of the world's population and more than one-third of Australians. The majority of patients experience reduced quality of life and reduced effectiveness at work, school and home for up to one month each year. The causes of TTH include mental and physical stress and muscle tension on the scalp and around the neck. Commonly-used medications include simple pain killers and anti-depressants. They are either not effective for long-term management or not tolerated by patients due to side-effects. Nearly one-quarter of TTH patients develop medication-overuse headache or chronic daily headache over a 10-year period.

Acupuncture is effective for various types of headache, and relieves TTH by 50% within 4 to 12 weeks of treatment, as demonstrated by a few high quality clinical studies. However, it does not address mental stress, the main trigger for TTH, and its long-term effect is uncertain. Cognitive behavioural therapy (CBT) utilises various techniques and teaches patients how to cope with mental stress and correct unhelpful thoughts, beliefs and behaviour, and thus produces a long-term effect for TTH patients.

AIM

We propose to undertake a clinical study to evaluate the long-term efficacy and safety of the combined therapy of electroacupuncture (EA) and CBT for TTH.

METHODS

Subjects and treatment

Twenty TTH patients will be included and randomly allocated to (1) an individualised EA alone group, and (2) an individualised EA then CBT group. The first group will have up to 18 sessions of EA over 12 weeks, and the second group will have up to 12 sessions of EA over six weeks then six sessions of CBT over six weeks. Treatment will be delivered by a registered acupuncturist and a registered psychologist.

Outcome measure

The primary outcome measures include: (1) number of days with headache per four weeks (with headache diaries); and (2) mean severity of average and worst headaches assessed with Visual Analogues Scales (VASs, 0 = no pain; 10 = worst pain possible) per four weeks (with headache diaries).

The secondary outcome measures include: (1) analgesics consumption for TTH per four weeks (with headache diaries); (2) any co-intervention for TTH per four weeks (with headache diaries); (3) mean duration of headaches per four weeks (with headache diaries); (4) Headache Impact Questionnaire (HIQ), which assesses pain as well as absence from work and reduced productivity; (5) Quality of life (QoL) assessed with SF-36; and (6) levels of stress experienced, assessed with Perceived Stress Scale-10 (PSS-10).

SIGNIFICANCE

The proposed pilot trial will be the first such project in the world in which acupuncture is combined with a well-received and practised intervention in pain management for TTH. The results will provide a rationale for a larger trial and be of significant value to patients and to clinicians in decision-making about the treatment of TTH.

EDITOR'S NOTE: A 2008 AACMA research grant was awarded to the pilot study. A study with a large sample size has received an NHMRC project grant in 2009 and will be conducted in Melbourne in the next three years.

Acknowledgment of Peer Reviewers, 2006–2008

It is with great pleasure that the AJACM Editorial Board and Management Committee extend sincere thanks to all of those who have undertaken peer reviews for the journal since its inception in 2006. The journal would not have been possible without the expertise of the following persons.

Christine Berle
University of Technology, Sydney, Australia

Katherine Berry
Acupuncture Network, Australia

Dr Stephen Birch
Stichting (Foundation) for the Study of Traditional East Asian Medicine (STEAM), The Netherlands

Mark Bovey
Thames Valley University, UK

Dr Ian Boyd
Therapeutic Goods Administration, Australia

Dr Tom Cheung
RMIT University, Australia

Warren Cochran
University of Technology, Sydney, Australia

Prof Marc Cohen
RMIT University, Australia

Dr Meaghan Coyle
University of South Australia, Australia

Prof Ashley Craig
University of Technology, Sydney, Australia

Dr Lin Dong
RMIT University, Australia

A/Prof Elizabeth Eckermann
Deakin University, Australia

Dr Heiner Fruehauf
National College of Natural Medicine, USA

Glendon Gardner
Pure Botanicals, Newtown, Australia

Mary Garvey
University of Technology, Sydney, Australia

Dr Leon Hammer
Dragon Rises College of Oriental Medicine, USA

Stephen Janz
Kenmore Centre for Health, Australia

Dr Jian Kong
Harvard University, USA

Prof Lixing Lao
University of Maryland, USA

Dr George Lenon
RMIT University, Australia

A/Prof Chun Guang Li
RMIT University, Australia

Dr Yun-fei Lu
AACMA Research Committee, Australia

Suzi Mansu
RMIT University, Australia

John McDonald
Griffith University, Australia

Felicity Moir
University of Westminster, UK

A/Prof Barbara Polus
RMIT University, Australia

Warwick Poon
AACMA Victorian State Committee, Australia

A/Prof Xianqin Qu
University of Technology, Sydney, Australia

A/Prof Carole Rogers
University of Technology, Sydney, Australia

Dr Elisa Rossi
Milano Medical Board for Non-Conventional Medicine, Italy

Dr Volker Scheid
University of Westminster, UK

Dr Sean Scott
University of Sydney, Australia

Walter Simpson
Currumbin Chinese Medicine Clinic, Australia

Dr Andrew Stranieri
University of Ballarat, Australia

Dr Mark Strudwick
University of Queensland, Australia

Dr Victor Vickland
University of New South Wales, Australia

Dr Sean Walsh
University of Technology, Sydney, Australia

Dr Ian Weeks
Deakin University, Australia

Dr Hong Xu
Victoria University, Australia

Dr Greta Young
RMIT University, Australia

Dr Jerry Zhang
RMIT University, Australia

A/Prof Shi Ping Zhang
Hong Kong Baptist University, China

A/Prof Shu-feng Zhou
RMIT University, Australia

2009 Advertising Information

Display advertising (per issue)

All quoted rates are in Australian dollars and include Australian Goods and Services Tax.

Outside back cover (full-colour)	$2500.00	297 mm × 210 mm (depth × width)
Inside front cover (full-colour)	$2200.00	297 mm × 210 mm (depth × width)
Inside back cover (full-colour)	$2000.00	297 mm × 210 mm (depth × width)
Full page (mono)	$1500.00	288 mm × 200 mm (depth × width)
Half page horizontal (mono)	$1000.00	144 mm × 200 mm (depth × width)

Insertion rates (per issue)

$750.00 per sheet

Specifications

Artwork must be in a PC-compatible format (TIFF, JPEG or high-resolution PDF). Please supply artwork via e-mail or CD-ROM, including all images and fonts.
Screen: 300 dpi
Binding: Saddle stitched
Printing: Offset printing

Conditions

Acceptance of any advertising and insertion material is at the sole discretion of AJACM.

AJACM reserves the right to refuse to publish any advertisement or accept any materials for insertion which it feels is in any way inappropriate to the Journal.

Materials must be supplied in the required format and specification. AJACM will not be responsible for the quality or standard of materials supplied in an inaccurate and/or incompatible format and reserves the right to reject any advertising or materials that do not comply with the specifications.

AJACM does not take responsibility for the printing or photocopying of material for insertion. All such materials must be received printed and ready for insertion.

As AJACM is subject to certain restrictions on both size and weight, AJACM reserves the right to refuse to publish or disseminate any advertisement or advertising material which it feels will cause the Journal to exceed these restrictions.

Contact for advertising

For further information regarding advertising, please contact the AACMA Publications Department.

Phone: + 61 7 3324 2599 ext. 15
Fax: + 61 7 3394 2399
E-mail: publications@acupuncture.org.au

Publication and Subscription Information

The Australian Journal of Acupuncture and Chinese Medicine

Finished size:	297 mm × 210 mm (A4)	
Print run:	3500	
Frequency:	Biannual	
Readership profile:	Practitioners, academics, researchers, theorists and students in the fields of acupuncture, Chinese medicine, biomedicine and Asian studies	
Estimated distribution:	Australia	65%
	Asia-Pacific	25%
	Other	10%

AJACM | subscribe for 2009

AACMA members – free as part of annual membership (Members should not complete this form)

Individual subscription – delivery within Australia $50.00; overseas delivery $75.00 ❑ 2009 ❑ 2008 (additional $50/$75)
Institutions and libraries – delivery within Australia $200.00; overseas delivery $225.00 ❑ 2009 ❑ 2008 (additional $200/$225)

All quoted prices are in Australian dollars and include postage.
New subscribers for 2009 will receive a complimentary copy of AJACM volume 1, issue 1 (2006).

Subscriber details

Title: Prof/Dr/Mr/Ms/Mrs/Miss

Family name: _____ Given name(s): _____

Position & Organisation (if relevant): _____

Delivery address: _____

State/Province: _____ Postcode/Zip: _____ Country: _____

Phone: _____ Fax: _____ E-mail: _____

Payment Details

Amount paid: $_____ (Australian dollars only)

❑ Please find enclosed cheque/money order made out to AACMA, OR charge my credit as follows:

❑ Visa/MasterCard ❑ AMEX Name on Card: _____

Card Number: _____ Exp Date (MM/YY): ___/___ Signature: _____

All payments must be in Australian dollars.
Please forward cheque/money order payments (Australian personal cheques and money orders only; bank draft only for overseas cheque payments) to:
AACMA PO Box 1635, COORPAROO DC QLD 4151 AUSTRALIA. Card payments can be forwarded by mail, or by fax to + 61 7 3394 2399.
For subscription enquiries, contact AACMA. E-mail: aacma@acupuncture.org.au, Telephone: + 61 7 3324 2599