

Australian Journal of Acupuncture and Chinese Medicine

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Editorial

If we consider Chinese medicine to be a living being then, over the last six months, the being has experienced internal disharmony of qi and invasion of external pathogens.

If the theories and knowledge of Chinese medicine are the kidney essence of this being, then our practitioners are the heart. The Chinese Medicine Board of Australia (CMBA) is the regulating organ, the liver; whereas our professional associations, such as the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA), are the spleen.

Firstly, when the registration standards were released this may have unsettled many practitioners as any changes could disharmonise the internal balance of the being. Therefore, the liver overacts on the heart. When the heart is disturbed, it unsettles the *shen* of the being. Disturbed heart *shen* may cause various forms of illnesses. In the long-term, it will eventually damage kidney essence, the very form of energy we want to preserve and nurture. The spleen has worked hard to support the heart and counter balance the liver. For instance AACMA has lodged various submissions to the CMBA on a number of standards issues, including English language standards, and has also supported the members by helping them complete the application form. In addition, the CMBA has also tried to smooth the regulating phase by releasing a number of communiqués. Although there has been disharmony of qi, the being has amazing internal adjustment systems and balance and counter-balance systems. At the time of this editorial, I am sure that the *shen* would have settled a bit and I believe, in the end, the being will regain its harmony.

Secondly, Friends of Science in Medicine (FSM), an organisation which purportedly promotes 'a rigorous application of best science' to health education and practice, has been attacking Chinese medicine and called to cease national registration of our profession on the ground that Chinese medicine is not evidence based. FSM in some way has become the external

pathogens attempting to invade the being. We all know we need both the treatment to expel pathogens and the treatment to strengthen righteous qi in order to successfully defend the being. As a journal advocating rigorous methodologies in Chinese medicine research, the Australian Journal of Acupuncture and Chinese Medicine treats 'the invasion' seriously and has invited a number of educators, researchers, and practitioners from Chinese medicine, complementary medicine and integrative medicine, and a philosopher to respond. You will read a series of commentaries as Guest Editorials in this issue. We hope these expert opinions will provide the means you need to 'expel' as well as 'strengthen'.

It is pleasing to see that the strengthening force is not only from the within, but also from the without, and it is pleasing to see like-minded institutions. In this issue, we also introduce three organisations, including the National Institute of Complementary Medicine (NICM), Painaustralia and the Australasian Integrative Medicine Association (AIMA). You will find a range of activities of Chinese medicine within different fields of other health practice and research.

Our journal celebrates diversity in Chinese medicine. In this issue, we present you with a randomised control trial examining the use of one specific form of acupressure for neck pain and a two-part paper on emotions, desires and fire in Chinese medicine. The latter two papers bring us back to the classical and historical discussion on how desires and emotions disturb the heart and kidney. Given the high prevalence of mental health problems in the modern society, you will find these two papers stimulating your thoughts and helping you re-examine the practice.

We hope this issue bring some healing to our practitioners by 'calming the *shen* and strengthening the righteous qi'.

Zhen Zheng
Editor-in-Chief

Guest Editorials: Response to Friends of Science in Medicine

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Medicine, Science, Arts and Friends: What do we make of the claims made by Friends of Science in Medicine (FSM)?

EDITOR'S NOTE: FSM is an Australian organisation that was formed at the end of 2011. It claims it has now more than 700 members from medical and other health and non-health related disciplines. The founders of FSM were concerned with 'pseudoscientific' health care that have wasted 'our taxes' in funding the treatment and the tertiary education of relevant courses. They claim that modern medicine should be based on 'scientific evidence of effectiveness', and complementary and alternative medicine is 'fraudulent', 'misleading' and 'comprising the health of the public'.

So how do Chinese medicine practitioners think and respond to the claims made by FSM? We are fortunate to have a panel of experts from different fields to help us analyse and think of the recent events. They help us broaden our view on a number of aspects. What is medicine? What is science or knowledge? Is medicine science or arts? What is the evidence supporting FSM's claims? How rigorous FSM's methods are in arriving at their claims? What is tertiary education for? How is FMS compared with fundamentalism in religion?

Our thoughts are very much stimulated by the panel's analysis and 'dissection'. We hope you too find the discussion thought provoking.

Friends of Science?

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Complementary medicine treatments are used by two in three Australians each year and have been taught in Australian universities for two decades. The negative media campaign initiated by the self named 'Friends of Science in Medicine' (FSM) is an unfortunate and retrograde step for the progress of science and openness in healthcare. It reflects a dismal view of scientific debate and a shameless push to censor learning. The FSM appear to be campaigning most explicitly against

university education of complementary medicine practitioners and urge caution against investment in complementary medicine research. To this end the FSM have been lobbying university vice-chancellors and a wide range of scientists, both clinical and non-clinical.

Rigorous testing of all modalities of healthcare, including complementary medicine, and the promotion of evidence-based clinical practice is important. However, 'evidence-based medicine' is a relatively new approach and many current medical and allied healthcare practices have not been rigorously tested.

We need to continue to intensively study and teach about therapeutic foods, medicinal herbs and pharmaceutical drugs in universities, each for their important roles. Herbal medicines generate one of the most important scientific challenges in medicine in that combining small amounts of compounds

appear to offer a real and sustained clinical effect in improving health outcomes. Compounds in herbal medicines seem to work in a gradual but synergistic (and antagonistic) fashion to impact on the multi-factorial nature of disease. Research into the complex interactions of herbal compounds represents an important challenge to our current and dominant approach to disease management with a focus often (and preferably) on one principal target receptor. Similarly, acupuncture with its range of neurophysiological effects, encourages us to think more broadly about potential therapeutic approaches to managing functional disorders.

Abolishing the teaching of complementary medicine from universities would significantly undermine any improvements in evidence-based clinical practice of complementary medicine and remove the direct link between research and education that helps communicate the fruits of research rapidly and effectively to clinicians. To impose greater barriers to this translation of research into practice is counter-productive to quality care of patients. Chinese herbal medicine is administered routinely in the world's largest hospitals for many chronic diseases. There is no better place than our universities to rigorously discern what works from what doesn't in an Australian context.

Judging by some communications it is clear that not all FSM signatories have been aware of the extent and agenda of the FSM campaign and have expressed their dismay. We believe that a negative campaign can only encourage patients and practices to go underground – contrary to the aims of Australia's National Medicines Policy. This outspoken disregard for patient choice will only discourage patients further from disclosing complementary medicine use to their doctors which is counterproductive to safe and effective clinical care.

The FSM campaign should be opposed because:

1. It draws insufficiently on discipline expertise and current evidence in complementary medicine.
2. It weakens our National Medicines Policy approaches to strengthen the development of evidence-based practice through further research and to better inform health care decisions in complementary medicine.
3. It ignores the important connectivity between research and education in universities.
4. It encourages a sense of shame amongst complementary medicine users and undermines open communication between patients and carers.
5. It does not recognise the important clinical contributions that are likely to emerge from further exploration of practices such as Chinese herbal medicine and acupuncture.
6. It implies (incorrectly) most other taxpayer funded healthcare practices have sound clinical evidence bases.
7. It dismisses individual choice in healthcare and assumes no scientific evidence means no practice evidence at all.

Complementary medicine has for good reasons attracted unwavering popularity and consumer interest spanning many decades. It is our ethical responsibility to examine, teach and promote its appropriate use and practice.

The Art and Science of University-based Complementary Medicine

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The Friends of Science in Medicine (FSM) group have recently launched a campaign aimed at stopping universities teaching acupuncture, herbal medicine and other forms of complementary medicine which they claim are 'unscientific'. They further aim to pressure health insurance companies to stop paying benefits for these therapies. The FSM campaign however, is based on emotive referrals to 'pseudoscience' and 'quackery' and reference to various media reports, rather than drawing on any published evidence or scientific arguments. This group also fail to recognise that medicine was an art long before it was a science and that an overemphasis on a single, narrow-minded view of science, can leave patients inadequately treated and without hope, care and compassion.

Patients often suffer despite having been treated with the best medical science has to offer, yet there are a range of safe natural therapies which, although not fully understood, can provide profound relief for such patients. There are also many intangible elements in medicine which science is still discovering. Many of these elements are captured in traditional medical systems and to lose them due to an overemphasis on science would be to leave patients to suffer.

That is not to say that modalities such as acupuncture and herbal medicine are without a scientific basis. Certainly, there is strong evidence for these modalities based on generations of empirical science and traditional use, as well as mechanistic animal studies and human clinical trials. More than a decade ago it was argued that acupuncture can be considered a part of mainstream medicine¹ and it has now been reimbursed by Medicare for more than 30 years and is now offered as standard care in some emergency departments with emerging evidence suggesting that acupuncture is comparable to pharmacotherapy for providing analgesia in this setting.

While medicine certainly needs to be informed by science, this has to be done cautiously. Medical science can be fickle and has brought us many treatments such as thalidomide, hormone

replacement therapy and Cox 2 inhibitors, which have been shown to be potentially more harmful than helpful. We need to engage in critical evaluation of all therapies including western medicine. Such critical enquiry is best fostered in university settings where students are informed by an education that draws on our current scientific understanding of a wide range of disciplines including anatomy, physiology, pathology and research methodology along with social psychology, anthropology, ethnobotany, and medical history.

There is still much we can learn from ancient modalities. For example traditional Chinese medicine offers a different way of thinking and just because we do not fully understand the western scientific basis behind a therapy does not mean we should not use it. We still do not know how most anaesthetics work yet they are used routinely for the benefit of countless patients and just because acupuncture meridians cannot be found anatomically, does not mean they are not useful. Similarly, you will never find the equator or the earth's lines of longitude or latitude by digging, yet they are still useful constructs for navigating the planet.

In my medical training I was taught the central dogma of molecular biology that genes control the cell, this has now been shown to be false. Similarly, dogma has existed in some natural medicine courses. We should not have any health graduates who rely on blind faith – including blind faith in the science of the day. We need graduates who are able to be independent critical thinkers and life long learners who can see beyond dogma of any kind and undertake their own critical scientific inquiry. It is clear that this is best done in universities where practitioners can learn to integrate the best of current medical science with the art inherent in ancient traditions and become informed, thinking human beings and compassionate, caring practitioners.

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Where does the evidence lie? A response to the recent media blitz on Chinese medicine and acupuncture

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It was with both amusement and concern that I observed, and later had the opportunity to participate in, the recent media blitz on complementary medicine, and, in particular, acupuncture and herbal medicine, that occurred in the first part of 2012. This blitz revolved around three separate-but-related issues, these being whether complementary medicines should be taught in universities, led by Friends of Science in Medicine (FSM); the opposition of the Australian Medical Association in questioning whether Chinese medicine should be regulated; and the recent publication of the DNA contents of smuggled Chinese herbal products that were found to be contaminated.¹ Three separate-but-related issues, which while coming from separate sources, aimed at denigrating acupuncture and Chinese herbal medicine.

The first instance involved a concerted effort by the FSM in writing to the vice-chancellors of universities teaching complementary medicine and questioning whether the courses should be in publically-funded institutes of learning. As an active researcher in a university it was interesting to note that while they focussed on the scientific validity of many of the complementary practises there was little mention of scientific evidence at any point in their argument. One only has to look through the systematic reviews of both acupuncture and Chinese herbal medicine to draw attention to their inaccurate assertion. A recent letter from Professor Edzard Ernst demonstrated that the evidence for acupuncture is indeed increasing. To quote Ernst 'In total, six of the 21 Cochrane reviews evaluated here generated positive or tentatively positive results. This is a substantially higher percentage than in my previous review'.² While he does put a caveat on this statement it nevertheless highlights the increasing published evidence supporting the use of acupuncture. While we all agree the methodology of acupuncture research needs to be improved and the number of publications increased (both supportive and non-supportive studies), it does require concerted effort and funding that can only be achieved in a university environment. For example, research needs appropriate ethical approval which at this point in time is only available in the university or hospital sectors. You need specially designed research facilities and administrative support that also can only be obtained in these environments. Chinese herbal medicine research is very similar and may

need even more institutional support as quality control and safety are additional concerns for herbal research. As to the evidence, a similar level to acupuncture can also be found for Chinese herbal medicine as well. A 2009 study that reviewed 50 reviews concluded that '23 reviews were reported as being inconclusive, while 27 concluded that there might be benefit of CHM (Chinese herbal medicine)'.³ A more recent review of the quality of Chinese medicine reviews found that of the 42 reviews they assessed '22/42 herbal medicine reviews concluded that there was not enough good quality trial evidence to make any conclusion about the efficacy of the evaluated treatment, while the remaining seven acupuncture and 20 herbal medicine reviews ... indicated a suggestion of benefit'.⁴ It is also helpful to remember that insufficient evidence does not mean no evidence. As usual the reviewers of both of these reports highlight the need for high quality, well designed, statistically powered studies which can only be achieved in (yes, you guessed it) well-resourced institutions such as universities which I can only whole-heartedly espouse as well.

The second issue revolved around whether Chinese medicine should be regulated by the Commonwealth government in that it gives some type of kudos or acceptance of its practice. In fact, national registration (and I am sure you already aware) is to protect the public and has nothing to do with support or validation of the practice of any type of complementary therapy or product. It identifies to the public that any registered Chinese medicine or acupuncture practitioner they choose to consult has met certain criteria including a high level of education and ethical practice. In addition registration gives authority to the Chinese Medicine Board of Australia to deal with any unscrupulous or unethical practice that does occur infrequently in any medical or allied health profession. One only has to look at the records from the Victorian registration experience to see it can be achieved effectively.

Finally, the issue of the 15 traditional Chinese medicine (TCM) smuggled sample products that were assessed using high-throughput sequencing (HTS) of DNA and subsequently found toxic and endangered animal and plant species. This incident only emphasises the effectiveness of established regulatory systems for Chinese herbal medicine in Australia and the responsibility that both the Therapeutic Goods Administration (TGA) and the Australian Quarantine and Inspection Service (AQIS) have in ensuring that only safe and quality products are allowed into the Australia market after rigorous evaluation. While the media jumped on the contamination issue, little notice was taken of the fact that these products were not on sale in Australia and that, rightly, they had been confiscated before entering Australia.

Despite these recent unsupported and often inaccurate media assertions Chinese medicine still has a huge task ahead before it can prove itself of worth. Peer reviewed scientific journals such as this journal and the efforts of research colleagues

in CompMED (University of Western Sydney) and RMIT University, as well as other pockets around Australia, are essential in developing the emerging evidence base for Chinese medicine and need the support of the profession. To paraphrase President John F Kennedy 'don't ask what the profession (country) can do for you; ask what you can do for your profession (country)'.

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The Politics of Science

By Prof. Ian G Weeks BA, MA, PhD (Melb.)

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From time to time Chinese medicine has been attacked because, so it is claimed, it is not scientific. Recently an organisation calling itself Friends of Science in Medicine (FSM) has been established. It says that its aim is 'to reverse the current trend which sees government-funded tertiary institutions offering courses in the health care sciences that are not underpinned by sound scientific evidence'. This organisation is not very specific about which universities or which programmes they have in mind, and they appear to lump together most, if not all forms, of 'complementary medicines'. I think that there are several issues involved here that readers of this journal need to think about.

For several years I have been on the panel which helps to select students for the new Doctor of Medicine degree at the University of Melbourne. After an initial cull based upon results in undergraduate programmes, selectors such as myself share in administering a fascinating selection process in which students are evaluated for such qualities as empathy, understanding bullying, the ability to listen to others, and their capacity for explaining complex ideas in direct and simple language. This process of selection had its origins in the very innovative medical training programmes at McMaster University which have been skilfully adapted for use at the University of Melbourne. It is interesting and important to see that this selection process, while making some acknowledgement of the role of science

in medical practice, also places a strong emphasis on the human qualities of those who are chosen to train as medical practitioners. The team at the university shows an interesting historical awareness in this method of selection. It shows a clear understanding that medicine is a human and humane practice that calls upon all of the skills and abilities of future practitioners. That practice will not only be 'scientific' but also a humanistic practice.

The nature of science and its role in medical practice, in the West, has a considerable history. FSM seem sadly ignorant of that history. Firstly they seem ignorant of the curious history of the idea of science. The Latin word *scientia* simply meant *knowledge*. For most of the history of the western world it was thought that theology and metaphysics were the highest sciences. In the sixteenth century CE a movement began in which certain kinds of empirical research came to claim the term *science*. Such a claim for much of the next two or three centuries was not widely accepted. It is only in the last two centuries that this particular claim to be a science was widely accepted. That acceptance, just as the acceptance of older meanings, is essentially a political and historical matter.

By saying that the claim to be a science is a *political* matter I mean that the idea of a science has been and will be *contested*. This is also the case with all other disciplines that you find in any university. The fact that all disciplines are contested can be seen in any history of what is taught and researched at universities. I began my undergraduate studies at the University of Melbourne in 1956, which is the year in which Psychology left the Philosophy Department and became a separate discipline. Almost every discipline at all Australian universities has been created in the past 150 years. Medicine, for example, was quite late in becoming a university discipline. The same is true across the world. It should be borne in mind that the oldest Western universities are well over 800 years old. All new disciplines had to struggle to gain acceptance and funding. The fact that disciplines have to compete with others is an important aspect of the advances made in those disciplines. If there were no such competition the disciplines would soon wither and die. So the attempt to get the 'big brother' of the government on side to reduce or block competition from other branches of knowledge is, curiously, a strategy that would bring 'medicine' into disrepute and not be in the interests of any genuine science.

By saying that the claim to be a science is an *historical* matter I mean that the ideas of a science or of medicine have changed and will change over time, especially as they face competition from other bodies of knowledge and other claims to knowledge. The idea of history expanded dramatically from the beginning of the nineteenth century. Until then history was mainly *chronology*, a listing of the famous or infamous rulers, the beginnings and ends of some empires, and occasionally of

great events. The expanded idea of history came to see that history is to human beings very similar to what the atmosphere is to us: history is the sphere in which human existence takes place. Everything that human beings do and think is historical – they all came to be, have changed and will eventually die out; they all reflect aspects of the wider life of the various human communities. So, all sciences have been, are and will be subject to change.

Knowledge, in all its forms, lives in the minds and practices of human beings. Knowledge is related to the paradigms and idea – pictures that we have and to what we consider most important. That is to say that any science is paradigm-dependent. So for some time concepts of physics were thought to be the basis of science and the paradigm for any other sciences. Over the last century and a half a new science – evolutionary biology – developed and it is producing some basic paradigms that are not the same as those of physics. The concept of 'emergence' introduced a more 'historicised' understanding into science. Or consider the very atomistic and reductionist accounts of knowledge that were prevalent in the seventeenth and eighteenth centuries, and the turn away from that way of thinking to ideas that are far more 'environmental', where the objects of knowledge are seen and understood in their various relationships. This in turn has consequences for cosmology and so for physics.

The dynamic nature of knowledge and science means that understanding a science or a practice such as medicine, requires breadth of knowledge and understanding. Those who refuse to think this way are prime examples of what is often referred to as fundamentalists. Fundamentalists divide the world into true believers and members of 'the evil empire'. They, the fundamentalists, think that only their own way of thinking or doing is true and every other view is dangerous and wrong. As a student of fundamentalism I am intrigued in discovering in the FSM this latest version of fundamentalism – 'scientific fundamentalism'. So these fundamentalists, as does every other kind of fundamentalist, want to turn universities into places where only their understanding is supported and taught. Such an attack on the freedom of thought and discovery essential to what universities are is always paradoxical. In the name of science it undercuts the nature of science.

With 'Friends' like these...

A Look at the Future of Integrative Medicine in Australia

By **Dr Lily Tomas** MBBS, BSc(Med)

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In January 2012, the Friends of Science in Medicine (FSM) was launched as a new lobby group with the specific intent of arguing against the place of 'unscientific' complementary and alternative medicine (CAM) in universities, in private health schemes and, it would appear, medicine itself. FSM's assault, while claiming to be scientific, was quick to use less than objective terms such as 'pseudoscience', 'nonsense' and 'quackademia' in attracting public attention upon its crusade against complementary medicines.

Harsh critics of most, if not all, forms of complementary medicines, FSM's claims are also unafraid to step beyond the argument of lack of evidence in reinforcing their position. Amongst their Facebook proclaimed missions exist comments such as 'to reduce the real and potential harm of CAM' and the blatant statement regarding practitioners of complementary medicine and their 'covert attempts to deceive the public'.

One asks, however, where is the evidence to demonstrate that the relative risk profiles of complementary medicine are anywhere near that of pharmaceutical drugs? Where is FSM's proof of any intended deception by complementary medicine practitioners, a statement of itself, if applied to an individual, would border on slander?

Indeed, in the case of interpretation of evidence FSM appear to be setting themselves up as the judge, jury and executioner upon what is and is not evidence-based medicine (EBM), the gatekeeper to their proposed acceptance of complementary medicine in universities.

Consider the following definition: 'Evidence Based Medicine (EBM) is the conscientious, explicit and judicious *use of current best evidence* in making decisions about the care of individual patients'.¹

Such an EBM definition importantly addresses the present environment in complementary medicine in which ideal evidence does not exist. It allows for the use of 'current best evidence' as guide posts in the absence of 'gold standard' data. In particular, evidentiary guidelines accept that the limitation in present knowledge requires a fall-back position on less rigorously achieved evidence including, importantly, Traditional Evidence (Level 5).

What are we to do in the interim prior to the achievement of 'gold' standard evidence?

FSM would have the universities remove complementary medicine from their curriculum. This, however, begs the question, if there is no complementary medicine presence in universities, who then is going to perform the research that the FSM claim they would support?

Complementary medicine is in a difficult situation regarding the funding of research. Indeed, at this point the cynical might suggest that EBM risks pandering most to *money based evidence* (with all of the obvious dangers this implies ... think, for example, Vioxx) than science itself.

Quality trials by their very design require sufficient funding. Where are such grants and finances going to come from, particularly in the circumstance that, unlike pharmaceutical medicines, complementary medicine products do not acquire patent protection and hence proportional return on research investment?

Furthermore, in the most likely scenario that vested industry interests provide such funding, what is the likelihood that academics would negate the results purely on the suggestion of conflict of interest?

This highlights further the question as to who should be performing such trials and interpreting the data such that it would be meaningful to organisations such as FSM. The example below provides clear evidence of the dangers when complementary medicine is analysed by non-complementary medicine interests.

In a previous meta-analysis of vitamin supplementation by Bjelakovic et al (2007) in JAMA², highly critical outcomes were suggested by the authors. However, the meta-analysis itself, which caused popular ripples in the mainstream press as to how vitamins actually kill, was in return critically assessed by Hickey et al in the *Journal of Orthomolecular Medicine* (2007)³ demonstrating what they believed were valid flaws in data analysis as well as an inability to generalise the meta-analysis conclusions to a wider population.

To place this argument in context, it would be considered absurd for complementary medicine practitioners to academically assess data on surgical outcomes, for instance. What credence can be placed on the results of trials or meta-analysis performed by critical academics with an open hostility towards complementary medicine?

Non-science, pseudoscience, quackery ... or a witch hunt by a biased academia?

Indeed, it might be a little easier to accept the scrutiny of medical academics upon complementary medicine if only they would apply the same rigorous standards in their own backyard. Mainstream medicine is haunted by its own dark elements, aspects of which would clearly benefit from FSM's scrutiny such as:

- The clearly documented 'real and potential harm' from many pharmaceutical medicines – including Vioxx, synthetic HRT, Cisparide, for example.
- The prescription of many drugs for uses they have not been studied for.
- Academic fraud and disease profile manipulation as to increase the proportion of the population on prescription drugs.
- The rampant conflict of interest amongst medical journal articles that goes unquestioned, simply because otherwise there would likely be too few articles!
- Most post-graduate education is dominated by events and resources linked to vested interests.

This is certainly not to denigrate mainstream medicine despite its many present flaws. In particular, mainstream medicine is extremely suited to acute situations, however, falls down when applied to chronic disease.

As an Integrative Medical Doctor I value pharmaceutical medicines but realise the significantly additional benefit when my armoury is added to with safe and effective complementary medicines.

Wouldn't a more sensible approach be for each of us to concentrate on increasing the professionalism and efficacy of our own areas of interest, rather than seeking conflict and, indeed, polarisation with the expertise of another?

In fact, what may be feared most is the interpretation that might be placed on this conflict between mainstream 'western' medicine and the many modalities derived from cultures that have historically accepted tradition as evidence (Oriental, Auyeveda, indigenous Australian etc).

Are we to challenge not only a modality, but a culture and even a population group's medicine simply on the premise that they have yet to demonstrate their medicine's efficacy according to western principles of investigation?

Certainly if science shows that a traditional medicine cannot be backed by irrefutable evidence **once** research has been objectively undertaken then FSM can argue against its use.

Yet a genuine scientist should be otherwise stating the case; traditional evidence provides a hypothesis for investigation, therefore there is a need to provide the research, hopefully within well-funded academic programmes, to support or refute the hypothesis.

And this is where the FSM movement shows the nature of its ultimate hypocrisy.

Let's eliminate complementary medicine from universities, make it near impossible to undertake quality trials.

And, after which, claim there is no evidence because no trials have ever been done.

With 'friends' like these...

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'Friends of Science' not evidence-based

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An editorial appeared in the *Medical Journal of Australia* on 5 March 2012 entitled 'Tertiary education institutions should not offer pseudoscientific medical courses'.¹ The editorial is authored by two founding members of the Friends of Science in Medicine (FSM) which is 'dedicated to countering the growth of pseudoscience in medicine'; however nowhere in this editorial is any definition of 'pseudoscience' offered. Indeed the editorial is peppered with emotive rather than scientific language – 'subterfuge', 'alarmingly', 'sully'.

The most concerning aspect of this editorial however is the lack of evidence for some of the assertions made. In this editorial the assessment of the levels of evidence supporting the efficacy of acupuncture is not based on primary sources such as the Cochrane central register of controlled trials which lists 5744 controlled trials of acupuncture (compared with 3301 for physiotherapy) or the Cochrane database of clinical reviews which lists 73 Cochrane systematic reviews concerning acupuncture (of which 37 are specific to only acupuncture) and 213 other reviews. Instead the authors cite a book *Trick or treatment: the undeniable facts about alternative medicine* by Singh and Ernst in which Ernst manages to contradict the findings of four systematic reviews on acupuncture which he himself co-authored. The rigorous editorial scrutiny which should be expected from a scholarly medical journal is sadly lacking in this case, but it is noted that the editor declares herself to be a member of FSM.

'Medical courses have intense and regular external accreditation of their courses, but alternative medicine courses have no such safeguards'. This statement is demonstrably false. Bachelor degree courses in acupuncture offered by private colleges in Australia have undergone intense scrutiny since their inception by external bodies including state education authorities (such as the Higher Education Board and the Office of Higher Education), professional associations (such as the Australian Acupuncture and Chinese Medicine Association Ltd [AACMA]) and in Victoria the Chinese Medicine Registration Board [CMRB (Vic)]. University courses in acupuncture have also been subject not only to their own internal course approval processes but also to scrutiny from AACMA and the CMRB (Vic). In future all courses, whether offered in universities or private colleges, in acupuncture and Traditional Chinese Medicine will be overseen by both the new Chinese Medicine Board of Australia (CMBA) which sets standards for registration of all students and practitioners and also operates its own course accreditation process, as well as the Tertiary Education Quality and Standards Agency (TEQSA).

Should anatomists be asked to support the validity of acupuncture meridians? Certainly not! Given that there are currently numerous competing theories on anatomical substrates of acupuncture meridians and points (none of which can adequately account for all of the observed characteristics of meridians) it would be premature to ask anatomists to be involved in such teaching roles.

FSM apparently 'supports research into alternative and complementary approaches *when this is justified*' [author's italics]; however, the actions of FSM in sending letters to grant reviewers for the National Health and Medical Research Council (NHMRC) warning them not to approve funding to complementary and alternative medicine (CAM) research suggests that perhaps, in their view, such research is never justified. Indeed this action would strongly suggest an attempt to introduce bias into the NHMRC funding review process. How can scientific method which strives to minimise bias be compatible with the 'Friends of Science' campaign to create bias?

Evidence-based medicine (EBM) was originally defined by Sackett et al in 2000 as 'the integration of best research evidence with clinical expertise and patient values'.² While meta-analyses and systematic reviews of randomised blinded placebo-controlled trials are regarded as the highest levels of evidence within the EBM framework, when such evidence is not available, then the best available evidence should be used. According to a review of 3000 treatments in Clinical Evidence, 11% of current medical practices are shown to be beneficial, a further 23%

likely to be beneficial, 7% trade-off between benefits and harms, 6% unlikely to be beneficial, 3% likely to be ineffective or harmful and 50% unknown.³ This is not a criticism of medical practice but rather a snapshot of where research is up to in providing high level evidence to support practice. For therapies which have not enjoyed strong funding support for research until very recently it is not surprising that high level evidence to support practice is less substantial than for more established therapies, however the fundamental principle of using the best evidence which is available remains valid.

FSM have even suggested that it is unethical to use any medical practice which does not enjoy the support of high level evidence. If the arguments of FSM were to be logically extended then 66% of medical practices should be immediately abandoned including surgery and psychiatry which lack support from randomised blinded placebo-controlled trials. Complex interventions, especially those which require high levels of practitioner skill are difficult to investigate with the randomised blinded placebo-controlled trial (which is more suited to simple interventions requiring low levels of skill).

Clearly FSM's very public media campaign is not about science given the rather cavalier attitude displayed to the evidence, and the strongly emotive tone of much of their writing. It is certainly about money – federal funding to universities, private health insurance rebates and research funding. It is certainly an attack on the credibility of CAM in a broad sense and acupuncture has been specifically targeted. It is an attack on the academic reputation of universities which offer CAM courses including acupuncture. It is also an attack on the transparency and independence of the NHMRC funding process. Money and medical dominance appear to be driving this campaign, not science – or at least that is what the best available evidence suggests.

Since all good research begins with a good question, perhaps the most relevant question is who is funding and backing the Friends of Science in Medicine?

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Treatment of Neck Pain with Collateral Meridian Acupressure Therapy: A Randomised, Sham-Intervention Controlled Trial

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ABSTRACT

Background: Collateral Meridian Acupressure Therapy (CMAT) is a relatively new technique that has been developed to relieve intractable pain. Little research has been, however, conducted to examine its effect on neck pain. The purpose of this study was to investigate the short-term effect of CMAT on neck pain. **Method:** In this randomised, sham-intervention control, patient-therapist blind trial, 60 patients who suffered from neck pain and had restricted neck movement were recruited. Participants were randomly allocated into the treatment group ($n = 30$) and control group ($n = 30$). CMAT was performed on the treatment group, while the control group received sham treatment. Severities of pain before and after the treatment were measured on a scale of 0 (no pain) to 5 (most severe pain). Chi-square and t-tests were used to analyse categorical and continuous data, respectively. **Results:** All participants completed the study. Prior to the treatment, there was no group difference in demographic or pain data. After the treatment, the severity of neck pain in the CMAT group (0.7 ± 0.6) was significantly less than that in the control group (2.8 ± 0.9). **Conclusion:** CMAT may induce an immediate analgesic effect on neck pain. Its long-term effect requires further research.

KEYWORDS Acupressure, neck pain, collateral meridian acupressure therapy, RCT

Introduction

Neck pain is a common symptom encountered by a high proportion of the population. With an increase in internet and computer usage, this affliction is becoming more and more predominant among office workers and students who use the computer daily for long hours.¹ Neck pain is usually a result of repetitive stress, degeneration and deformity of the cervical vertebrae as well as a loss of the natural curvature of the cervical spine.² Different methods of Chinese medicine may be used effectively to control and treat neck pain. A

quantitative meta-analysis has found that acupuncture is effective in the short-term treatment of neck pain.³ Other researched modalities are moxibustion, cupping⁴, point-injection⁵ and electro-acupuncture^{6,7}. Local acupuncture points such as GB20 *Fengchi* (风池) and GB12 *Wangu* (完骨)⁸, and distal acupuncture points such as SI 3 *Houxi* (后溪)⁹ and Luozhen (落枕) have been studied.^{11,12} Abdominal points (that correspond to the tortoise plastron)¹³ and scalp acupuncture have also been extensively used in the treatment of neck pain.¹⁴⁻¹⁶ Some of those modalities involve strong manipulation either with electricity stimulation or vigorous manual lift and thrust methods.^{8,11}

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Although a large percentage of patients may benefit from appropriate administration of acupuncture and/or moxibustion, many patients still hesitate to choose these treatments due to needle phobia, fear of pain, fear of strong physical manipulation, inconvenience of lengthy courses of treatment, and/or the high treatment cost. These reasons may often lead to delayed treatment, resulting in worsened and chronic pain.

In a paper published in the *TCM Shanghai Journal of Acupuncture and Moxibustion*, Dr Shan-Chi Ko proposed an effective treatment of cervical spondylopathy by pressing distant acupoints.¹⁷ It was discovered that by first identifying the affected meridian where the worst pain was located, and then pressing corresponding points on the distal parts of the body, the pain relief could be almost immediate. Contralateral acupressure may yield better therapeutic results than acupressure on the affected side.¹⁸ This discovery was later developed into the Collateral Meridian Acupressure Therapy (CMAT). It is found that manipulating two acupoints on a collateral meridian is more effective than local needling or treating the affected meridian alone.¹⁸ The two acupoints are (1) the *control point* for connecting the affected meridian, and (2) the *function point* for influencing the affected location. CMAT has been found to achieve dramatic results in reducing intractable pain in Complex Regional Pain Syndrome (CPRS)^{18,19} primary dysmenorrhea²⁰, and backache due to post-regional anesthesia procedure²¹.

The current study was carried out to investigate the short-term effect of CMAT in relieving neck pain. The hypothesis was that CMAT would reduce neck pain significantly better than sham intervention did.

Participants and Methods

This study was approved by the Education and Ethics Committee of Sydney Institute of Traditional Chinese Medicine, which also serves as a research ethics panel.

Participants were recruited amongst patients who attended a clinic of Chinese medicine. Patients with chief complaint of neck pain were included. Patients under 12 years of age, or who had surgical procedure in their neck region were excluded. Cervical radiculopathy was not part of the exclusion criteria. A total of 60 participants were recruited for the trial. Each one had pain and difficulty with either side-to-side neck rotation, or neck flexion and extension, or both. All participants had given written consent. The participants were randomly allocated into the CMAT group ($n = 30$) and the control group ($n = 30$). The randomisation was done by an interviewer by flipped a coin without knowing if heads/tails was to be the treatment or control group. The participants were also blind to their group allocation.

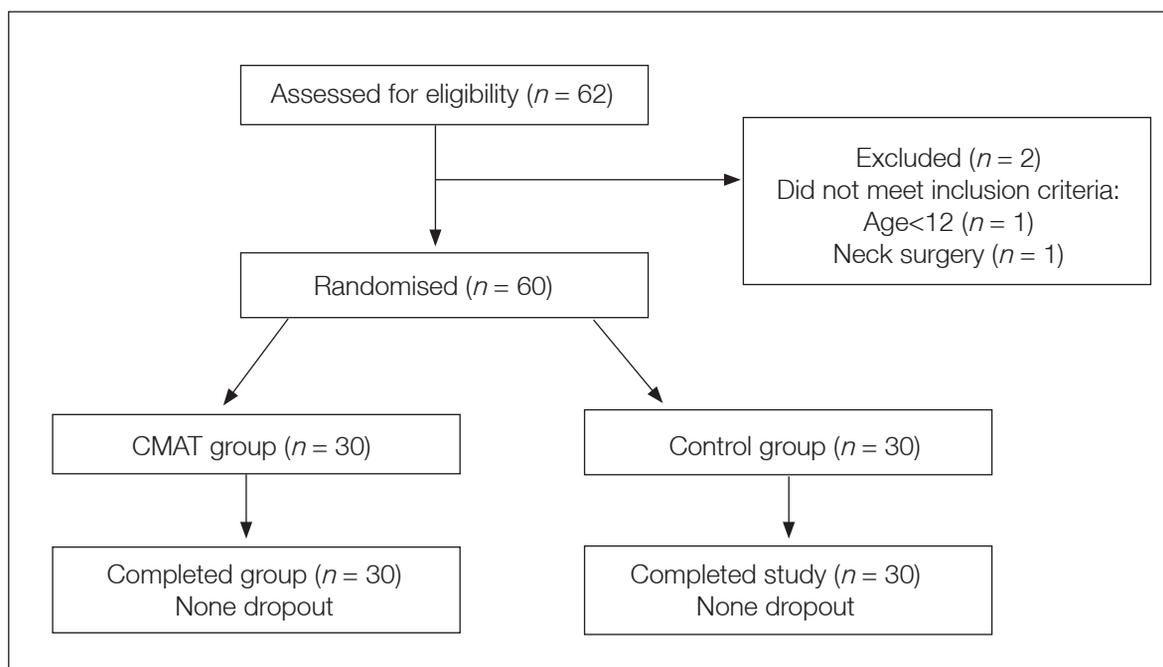


FIGURE 1 Flow chart of selection process

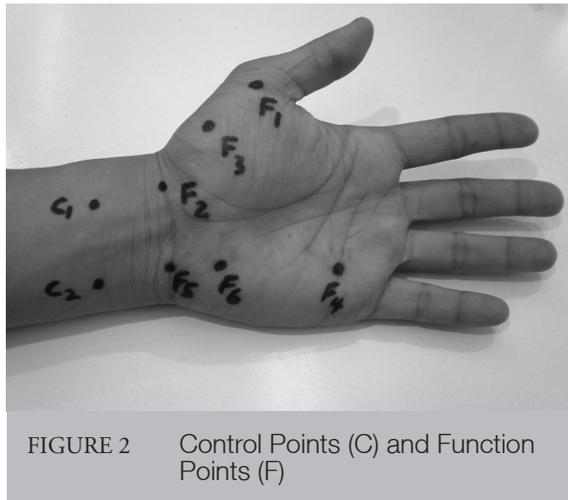


FIGURE 2 Control Points (C) and Function Points (F)

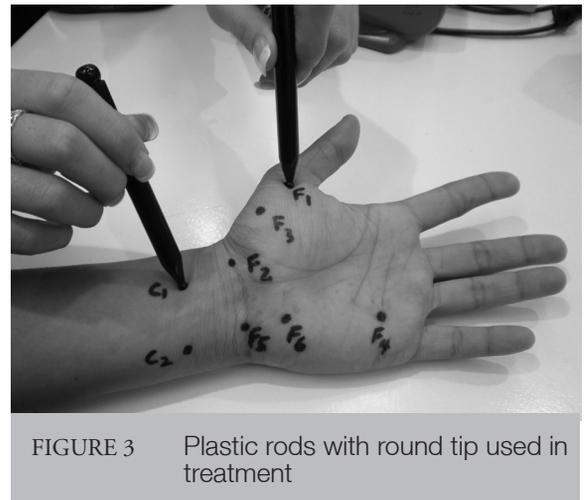


FIGURE 3 Plastic rods with round tip used in treatment

All participants were interviewed before their treatment. Data about their age, gender, duration of pain, location of pain, and severity of pain were recorded. The duration of pain was recorded as categorical data – acute and chronic, where acute was less than or equal to 12 weeks and chronic was more than 12 weeks. Pain scores were measured on a scale of 0 (no pain) to 5 (most severe pain). After the treatment, participants were asked to rate their neck pain again. The interviewer who collected the data and the practitioner who performed the treatment were not the same. The practitioner was an accredited qualified acupuncturist who had no knowledge about the pain scores of the participants at any point in time.

One session of treatment was given to all participants. For the CMAT group, a standard treatment protocol was used. Points F_1 , F_2 and F_3 were pressed one by one as function points in this sequence, while holding C_1 as the control point (Figure 2). Next, points F_4 , F_5 and F_6 were pressed as function points in this sequence, while holding C_2 as the control point (Figure 2). The same six points were repeated on the other arm in the same sequence. Pressure was maintained at each point for a minute using a plastic rod with slightly pointed round tip (Figure 3). Sufficient pressure was applied to each point till the patient felt some tenderness or pain on the point. For the control group, the same protocol was conducted with the exception that the points were touched gently without any pressure.

The data were entered into statistical software (JMP-IN 3.2.1, SAS Institute Inc.). The chi-square tests and t-tests were used to analyse the categorical and continuous data, respectively. The level of significance was set at $\alpha = 0.05$.

Results

A total of 60 participants with neck pain were recruited to this study. All participants completed the study and no side effects were reported. Table 1 summarises the demographic information of the two groups. There were no statistically significant differences between the two groups in terms of age, gender, duration and location of pain. The majority of participants in the two groups experienced pain along both the bladder and gall bladder channels.

The pain scores before and after treatment for both groups are presented in Tables 2 and 3 respectively.

Mean and standard deviation of the pain scores before and after treatment in two groups are presented in Table 4.

Results of the independent two-sample t-tests showed that prior to the treatment, there was no group difference in pain severity; and after the treatment, the CMAT group reported significantly lesser pain than the control group did ($p < 0.0001$).

Discussion

This study aimed to evaluate if CMAT was effective in relieving neck pain. CMAT is based on the theory of *Zang Fu Bie Tong* (脏腑别通), also known as *Zang Fu Tong Zhi* (脏腑通治)²². *Zang Fu Bie Tong* and *Zang Fu Tong Zhi* are translated as the Extraordinary Connection of *Zang Fu* by Dr Wei Jie Yang (杨维杰).²³ This system of the channels pairing is less familiar for most practitioners of Chinese medicine, compared with the more commonly known pairs such as the internal-external pairs (表里经), and the same name pairs (同名经). The pairing system is illustrated in Table 5.

TABLE 1 Demographic profile

		CMAT Group (n = 30)	Control Group (n = 30)
Age (yr) (mean±SD)		32.2±2.2	29.7±2.0
Gender N (%)	Male	16 (53)	15 (50)
	Female	14 (47)	15 (50)
Duration of pain N (%)	Acute	12 (40)	15 (50)
	Chronic	18 (60)	15 (50)
Location of pain N (%)	Along bladder channel	7 (23)	4 (13)
	Along gall bladder channel	10 (33)	9 (30)
	Along both bladder and gall bladder channels	13 (44)	17 (57)

(Data are mean±SD for continuous variables, and number (%) for categorical variables, $p > 0.05$ for all comparisons.)

TABLE 2 Pain scores of the two groups before the treatment (number [%])

	0	1	2	3	4	5	Total
CMAT	0 (0)	0 (0)	3 (10)	13 (43)	12 (40)	2 (7)	30
Control	0 (0)	0 (0)	6 (20)	14 (46)	8 (27)	2 (7)	30

TABLE 3 Pain scores of the two groups after the treatment (number [%])

	0	1	2	3	4	5	Total
CMAT	10 (33)	18 (60)	2 (7)	0 (0)	0 (0)	0 (0)	30
Control	1 (3)	0 (0)	10 (33)	12 (40)	7 (24)	0 (0)	30

TABLE 4 Pain scores of the two groups before and after treatment (Mean±SD)

	CMAT	Control	<i>p</i>
Before treatment	3.4±0.7	3.2±0.8	0.269
After treatment	0.7±0.6	2.8±0.9	<0.0001

TABLE 5 Collateral Channels used in *Zang Fu Tong Zhi*

Open		Pivot		Close	
<i>Tai Yang</i>		<i>Shao Yang</i>		<i>Yang Ming</i>	
Bladder	Small intestine	Gall bladder	<i>San Jiao</i>	Stomach	Large intestine
↕	↕	↕	↕	↕	↕
Lung	Spleen	Heart	Kidney	Pericardium	Liver
<i>Tai Yin</i>		<i>Shao Yin</i>		<i>Jue Yin</i>	

Pain is due to a blockage of qi. Most of the participants had neck pain located along the bladder channel and the gall bladder channel, meaning there was a blockage of qi in those channels. According to the *Zang Fu Tong Zhi*, the bladder channel corresponds with the lung channel and the gall bladder channel corresponds with the heart channel. By pressing points on their collateral channels – lung and heart channels respectively, it is possible to balance the flow of qi in the affected channels and relieve pain. In the standard protocol used in this study, C₁ and C₂ are the control points. C₁ connects the lung channel to the bladder channel, and C₂ connects the heart channel to the gall bladder channel. Function points F₁ and F₄ have an effect on the occipital area directly. Function points F₂ and F₅ affect the cervical region. Function points F₃ and F₆ affect the upper back.

Zang Fu Tong Zhi was first mentioned by Li Yan (李延 in *Yi Xue Ru Men* (医学入门) (Elementary Course for Medicine)²⁴ during the Ming dynasty. The theory was further elaborated by Tang Zong Hai (唐宗海 in *Yi Xue Jing Yi* (医学精义) (A Refined Interpretation of the Medical Classics)²⁵ during Qing dynasty. Dr Wei Jie Yang had applied this system in acupuncture and herbal treatments since 1972 and achieved remarkable results.²²

Zang Fu Tong Zhi is established based on the theory of the opening, closing and pivot nature of the three yang and three yin channels. The three yang channels are *taiyang* (太阳), *shaoyang* (少阳) and *yangming* (阳明). The three yin channels are *taiyin* (太阴), *shaoyin* (少阴) and *jueyin* (厥阴). It is mentioned in *Neijing* and *Lingshu* that '*Taiyang* and *Taiyin* opens, *Shaoyang* and *Shaoyin* pivots, *Yangming* and *Jueyin* closes' (太阳为开, 少阳为枢, 阳明为合, 太阴为开, 少阴为枢, 厥阴为合). Hence by matching the open-close-pivot nature of the three yang channels to the three yin channels, a new pairing system of *Zang Fu Tong Zhi* is established.²²

The same name channel pair matches a hand channel with a foot channel. For example, one can use points in the hand *tai yin* channel to treat an illness in the foot *tai yin* channel. The emphasis is on distal treatment – using the upper body to treat the lower body and vice versa. The internal-external pair matches a yin organ/channel to a yang organ/channel, and its emphasis is on yin-yang balance. In *Zang Fu Tong Zhi*, there is a hand channel and foot channel, and a yin channel and a yang channel in every pair, to reach a balance between hand-foot, upper-lower, *zang-fu*, and yin-yang. This may explain of the therapeutic effect of CMAT from the theory of Chinese medicine.²²

The strength of this study is that it is a randomised, sham-intervention controlled trial. However, due to time and budget constraints, the sample size selected for this study was only 60. The weakness of this study is that there is no sample size estimation and evaluation of the success of the blinding. This study only tested for short-term pain relief, hence the long-term effect cannot be established. It may be possible that data collected on a different trial of different setting or population may produce different results. Therefore, future study is encouraged to further explore the long-term effect of CMAT.

The CMAT seems to have a satisfactory therapeutic effect for patients suffering from neck pain. The findings of this study may help acupuncturists, and other healthcare professionals to discover a convenient yet non-invasive method of pain relief. The application of this method can even be taught to patients or their carers and be applied when necessary at home as part of self-help. This may improve the quality of patient care. CMAT may be considered as a treatment option, in conjunction with other conventional methods.

Clinical Commentary

This research finds that Collateral Meridian Acupressure Therapy (CMAT) seems to have a satisfactory, short-term therapeutic effect for patients suffering from neck pain. CMAT is based on a lesser-known meridian pairing system known as the *Zang Fu Tong Zhi*. CMAT may be considered as a treatment option for neck pain.

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Emotions, Desires and Physiological Fire in Chinese Medicine, Part One: The Pericardium and Lifegate

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ABSTRACT

Chinese medicine's concept of qi mediates between a person's mental-emotional life and the physiological processes producing and maintaining the body form. The pathogenic potential of human emotions and desires figured prominently in China's ancient medical and philosophical texts and, more than any other type of qi, the sovereign and minister fire embody the influences and relationships between mental, emotional, sensory and physiological activities. Contemporary traditional Chinese medicine (TCM) textbooks rarely mention the minister fire, except as an illness mechanism that is identified with liver and gall bladder yang repletion patterns. The preferred term for its physiological influences today is the kidney *yang qi*.

The two parts of this paper examine the physiological and clinical implications of the minister fire. In the *Yellow Emperor's Inner Canon* commentaries (after c. 100 BCE), minister fire is the complement of the heart's sovereign fire; in the *Treatise on Cold Damage* commentaries (after c. 200 CE) it is an emergent property of the lifegate; and in TCM it is equivalent to the kidney yang. When Song-Jin-Yuan (960–1368) medicine revisited the *Inner Canon's* division of the fire phase into 'sovereign' and 'minister', minister fire became a key physiological concept guiding some of China's lasting medical developments, methods and formulas.

Part One begins with the pericardium and lifegate. Premodern references link the pericardium and lifegate with the minister fire that disseminates the orders of the sovereign fire. Together, the pericardium and lifegate reflect the communication between the heart and kidney visceral systems and disseminate their qi-influences – the pericardium communicating the executive influences of the sovereign fire, and the lifegate producing the physiological influences of the minister fire. The minister fire itself, and the pathogenic stirring of minister fire due to emotions and desires, will be the subject of Part Two.

KEYWORDS Chinese medicine, qi physiology, psychology, mind, body, morality, ideology

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Introduction

Medical anthropologists and social scientists today recognise that emotions are an important bridge between mind and body, and between the individual and society. Nancy Schepper-Huges and Margaret Lock¹ showed how emotions entail personal feelings and cognitive orientations as well as public morality and cultural ideology. According to Schepper-Huges and Lock, emotions affect not only our subjective experience of illness and pain, but also the imaging of ‘the well or poorly functioning social body and body politic’.

Chinese medicine’s notions of qi presuppose the same connections. The *Yellow Emperor’s Inner Canon’s* (黄帝内经 *Huangdi Neijing*, c. 100 BCE) sociopolitical image of the body as empire or state represented the heart-spirit/mind (心神 *xinshen*) as the body’s sovereign ruler, and the sense organs (官 *guan*) as the ruler’s administrative officials. In the Han dynasty (206 BCE–220 CE) medical classics, the sense officials and their offices – the eyes, ears, nose, tongue, body, and mind – were the ‘six catalysts of desire’.² Each of the senses was prone to partiality, fascination and captivation by their own pleasures, and thereby ‘to subject the body to domination by external objects’.³

The authors of the *Inner Canon* observed how the emotions affected the qi: for example, they could cause the qi to ascend (anger) or to descend (fear); they could relax and slow the qi (joy), or consume the qi (sadness). The *Inner Canon* adopted the concerns expressed by Warring States (475–221 BCE) philosophers regarding the tension between the heart-mind (心 *xin*) and sensual pleasures. Song dynasty (960–1278 CE) physicians found that extreme or prolonged emotional states transformed into pathogenic heat.

One’s emotions and sensory desires were directly connected and constituted a threat to one’s self. Yielding to the desire for the sensual stimulation of external objects endangered correct functioning of the sovereign-heart/mind. If such desires were indulged, the person’s mind became distracted and obsessed, their senses dimmed and obstructed, and their perceptions distorted and inaccurate.⁴ Sustained or habitual desires or emotional patterns were ‘internal’ factors that could damage the interior and injure the yin visceral systems (脏 *zang*) directly.

Chinese medicine’s analysis of illnesses related to emotions and desires did not separate them from physical illnesses, and their manifestations were always entwined with the person’s somatic experience.⁵ The manifestations of anger, for example, are the same as those for the liver fire pattern – red face and eyes, shouting voice, agitation, bounding forceful pulse. Continued or habitual angry responses over time cause the

liver *zang* to lose its ability to course and discharge smoothly and its qi becomes stagnant. Stagnant liver qi has far-reaching physiological effects, it further predisposes the person towards angry responses, and prolonged anger injures the liver *zang* itself. This means that ‘emotion-related disorders’ are not mental, emotional or psychological disorders in the Western sense but functional or qi disorders in Chinese medicine.

Although the concept of qi has survived in today’s TCM textbooks, other non-physical medical entities with no correlate to the biomedical body have been de-emphasised. Chinese medicine’s premodern notions concerning minister fire (相火 *xianghuo*) for instance are not evident in contemporary TCM textbooks, and several factors have contributed to its demise. While sovereign fire (君火 *junhuo*) is clearly a locational and qualitative descriptor for heart fire, historically minister fire has been linked to or identified with the lifegate, kidney, *sanjiao*, liver, gall bladder, pericardium, stomach, spleen, pancreas and sexual potency, depending on the author and context. In TCM textbooks today ‘minister fire’ is rarely mentioned and the preferred term for physiological fire is ‘*yangqi*’ (阳气).

The occasional mention of minister fire’s various connections and interpretations in English language sources are difficult to reconcile for today’s TCM students and practitioners. Wang Bing’s (王冰 c. 710–805 CE) version of the *Inner Canon* defines minister fire as the heart-kidney and *sanjiao*-gall bladder channels (the *shaoyin* and *shaoyang*). The *Nanjing* (c. 100 CE) commentaries link it with the heart ruler-liver and *sanjiao*-gall bladder channels (the *jueyin* and *shaoyang*). Zhu Danxi (朱丹溪 1280–1358 CE) identified minister fire with lifegate fire, and said that minister fire is stored in the kidneys and liver and connected to the heart. According to Li Shizhen (李时珍 1518–1593 CE), minister fire inhabits the liver and gall bladder. Zhang Jiebin (张介宾 1563–1640 CE) identified it with the kidney, liver, *sanjiao*, gall bladder and pericardium. TCM has reconciled minister fire’s various representations by reassigning its physiological contributions to the kidney yang, and identifying its pathogenic influences with liver and gall bladder yang repletion patterns.^{6–9} Small wonder many contemporary authors have little to say about the minister fire.

To explore Chinese medicine’s early notions of physiological fire and its observations regarding the potentially disruptive influence of physiological fire when agitated or ‘stirred’ by emotions and desires, the paper will examine the minister fire’s premodern representations. Part One begins with the pericardium and lifegate, and minister fire itself will be the subject of Part Two. The discussion will show how the minister fire arises from the original *yang qi* held in the lower *jiao* (the kidney-lifegate) and connects with its executive expression in the upper *jiao* (the sovereign fire of the heart), and how their influences are managed by the liver and gall bladder

and by the special ‘envoys’, the pericardium and *sanjiao*. These relationships embody the physiological and pathogenic relationships between minister fire and the body’s physical, mental, emotional and sensory qi activities.

Parts One and Two itemise some of the developments in classic texts starting with the Han dynasty classics, the *Inner Canon*, the *Classic of Difficult Issues* (难经 *Nanjing*, originally c. 100 CE) and the *Treatise On Cold Damage* (伤寒论 *Shanghan Lun*, originally c. 200 CE). Many of the early notions concerning minister fire were refined and extended during the Song-Jin-Yuan dynasties (960–1368 CE).¹⁰ In the Song, desire’s longstanding reputation for depleting the qi was extended to include its newfound role in pathogenic fire. Subsequently, Ming and Qing (1368–1662 and 1662–1911 CE) scholar physicians refined the classic aetiology of depleted *yang qi* in terms of the lifegate.⁵

The Pericardium

In Chinese medicine today the pericardium is sometimes equated with the minister fire but only in the context of acupuncture and channel theory. In that context the pericardium is viewed as a qi-system that transmits the happiness, brightness and qi-influences of the sovereign heart-mind. Herbal texts almost never mention the pericardium however, and nor do the beginnings of acupuncture theorising in the Han dynasty (206 BCE–220 CE).

None of the Han medical classics refer to the hand reverting yin (手厥阴 *shou jueyin*) channel, today’s pericardium channel, or to the pericardium itself. The *Inner Canon’s Miraculous Pivot* Treatise 71 introduces the ‘heart enclosing network’ (心包络 *xinbaoluo*), an entity that surrounds and protects the heart so that evil qi cannot attack the heart directly. As a medical term, heart enclosing network indicates a dual function of enclosing and protecting (包 *bao*) the heart as well as connecting (络 *luo*) it with the lungs and the other visceral systems (脏腑 *zangfu*). In the *Inner Canon*, the heart enclosing network is the envoy that communicates and carries out the heart’s orders.¹¹

The *Plain Questions* Treatise 56 introduced the ‘heart ruler’ (心主 *xinzhū*), and like the heart enclosing network, ‘heart ruler’ refers to an entity through which the heart rules.¹² In the *Nanjing* the heart ruler is a branch of the heart lesser yin (少阴 *shaoyin*) channel. The *Nanjing* and its commentaries state that the heart ruler, heart enclosing network and the triple burner (三焦 *sanjiao*) have ‘no form’ (无形 *wuxing*). The notion of no form signals their unique role in the Chinese medical body, that of linking non-physical and physical life phenomena. Just as the heart enclosing network/heart ruler is the special envoy of the sovereign heart, *sanjiao* is the

envoy distributing source qi (元气 *yuanyi*) from the lifegate (命门 *mingmen*), also known as the ‘gate of orders’.

As envoys of the heart-sovereign, the role of both the heart enclosing network and heart ruler sounds similar to the notion of the ‘minister’ (相 *xiang*) who transmits the emperor’s orders. Both were relabelled ‘pericardium’ (心包 *xinbao*) from the Qing dynasty (1616–1911 CE), perhaps because of recent physical evidence. In 1575, Li Chan (李梴) had identified the anatomical pericardium, the thin membranous sac surrounding the heart, as the physical substrate for the heart enclosing network.¹³ To distinguish between early conceptions and their later anatomical re-badging, I will use ‘heart protector’ hereafter for premodern references to the heart ruler and heart enclosing network.

The *Nanjing* associates the lifegate with *zang* type functions and the heart protector with channel functions, although neither in fact is the sixth *zang*. The majority of Han dynasty texts mention only five *zang* and six *fu* and the *sanjiao* has no yin visceral counterpart. One exceptional treatise however, the *Plain Questions* Treatise Eight, does describe twelve palace officials (官 *guan*). In TCM textbooks, Treatise Eight’s palace officials are the internal visceral systems, even though Treatise Eight’s twelfth official is not a physical organ and nor is it the heart protector or lifegate: it is the ‘chest centre’ (膻中 *danzhong*).

The *Plain Questions* Treatise Eight says that the chest centre holds the office of ‘ambassador’ and is the official envoy responsible for happiness and joy. It acts like an envoy serving in the sovereign’s inner chambers: it connects to the heart and lungs, it facilitates communication, disseminates the heart’s commands, and happiness issues from it.¹⁴ Again, the chest centre’s envoy responsibilities sound similar to the minister and the heart protector, and in the *Miraculous Pivot* Treatise 35 the chest centre is the ‘palace’ of the heart protector (心主之宫城 *xinzhū zhi gongcheng*).¹⁵

Although Treatise Eight itself does not associate the chest centre with any of the other organ-channel systems, its representation of the chest centre has been adopted widely in contemporary descriptions of the pericardium.^{16–19} Today, 膻中 *Danzhong* is the Chinese name for the acupoint CV 17. ‘Chest centre’ refers to CV 17’s location on the anterior midline of the chest in the middle of the sternum, and to its clinical applications to benefit and regulate chest qi (宗气 *zongqi*).^{20–1}

Given its various names and representations it is no surprise that the contemporary Chinese medical literature remains ambivalent about the heart protector-pericardium. The *Miraculous Pivot* Treatise 10 and Treatise 71’s heart enclosing network is a channel, the *Nanjing*’s heart ruler was an extension of the heart *shaoyin* channel, and the *Plain Questions*’ chest centre was not the sixth *zang*. Furthermore, last century’s sociopolitical changes apparently led Chinese doctors

to avoid mentioning the pericardium because of its imperialist connotations.²² Although the anatomical term ‘pericardium’ (心包 *xinbao*) had been a recent addition to China’s medical discourses, its name is very similar to the *xinbaoluo*, the *Inner Canon*’s servant and envoy of the heart-sovereign. As the protector and envoy of the heart-sovereign, the pericardium was deemed a feudalistic relic, and ‘sources from the Gang of Four era [in the 1970s] derided the metaphor’.¹³

Nevertheless, Treatise Eight’s description of the twelve officials is still very influential in contemporary TCM basic theory. In TCM textbooks, the chest centre, heart ruler and heart enclosing network are all ‘pericardium’, and today’s notions of the pericardium are based on the chest centre/heart protector’s channel connections and associations rather than on their credentials as a *zang* functional system. Thus, the pericardium is the envoy in charge of happiness and joy, the ‘alarm’ (募 *mu*) point for the pericardium and for general upper *jiao qi*-functions is CV17 *danzhong* and, in TCM today, the fire phase of the ‘five phases’ (五行 *wuxing*) has two yin-yang pairs: the heart and the pericardium are the yin systems; their yang partner systems are the small intestine and *sanjiao* (三焦). Chinese medical historians note that the sixth yin-yang pair of systems was added to the fire phase after the Han, and the discussion will briefly touch on these developments to clarify their connections.

When Wang Bing (王冰 c. 710–805 CE) revised the *Plain Questions* in 762 CE, he added Treatises 66–71 and 74. These treatises introduce the five circulatory phases and six seasonal influences (五运六气 *wuyun liuqi*) doctrine,^{23–26} which split the five phases’ fire phase into sovereign and minister fires. The heart was associated with sovereign fire, and the heart protector and *sanjiao* with minister fire. In fact extant versions of the Han classics and their commentaries paired the *sanjiao* with the heart enclosing network (the *Miraculous Pivot* Treatise 10 and the *Nanjing* Issue 25); with the heart ruler (*Nanjing* Issues 25 and 38); and with the lifegate (the *Pulse Canon*, 脉经 *Maijing*, c. 250 CE). In each case, the yang-yin pair (the *sanjiao* paired with the heart protector or lifegate) represented the minister fire.¹¹

The *Inner Canon* and *Nanjing* texts are mainly concerned with ‘external’ acupuncture therapy and, from that perspective, the heart protector-pericardium is the logical yin partner for the *sanjiao*. From the herbal perspective, which is more concerned with ‘internal’ visceral processes and transformations, the lifegate-*sanjiao* pairing would have been more convincing.

Zhang Zhongjing’s (张仲景 c. 142–220 CE) *Treatise on Cold Damage* is a herbal text and does not mention the chest centre, heart ruler or heart enclosing network. The *Treatise on Cold Damage* (originally c. 200 CE) and its commentaries allocated the governance of minister fire to the *shaoyang*

(*sanjiao*-gall bladder), and held that minister fire inhabited the liver. In the Han dynasty, this represented a break with the *Inner Canon*. The *Treatise on Cold Damage* and the *Inner Canon*’s (Treatise 66–71, 74) explanation of the *wuyun liuqi* were largely ignored until the Song (960–1279 CE).

The *wuyun liuqi*’s association of minister fire with the *shaoyang* agreed with the *Treatise on Cold Damage*. The kidneys were no longer related only to water and the *shaoyin* as in the *Inner Canon*: the left and right kidneys were linked to the water and minister fire phases respectively – the *taiyang* and *shaoyang*. For Song dynasty (960–1279) physicians, the separation of fire into sovereign and minister fire was an important functional-physiological concept.

To explore these developments further, the discussion will now turn to the lifegate (命门 *mingmen*). Twentieth century senior physicians such as Qin Bowei (秦伯未 1901–1970) consider the lifegate a ‘crucial issue’ in Chinese medicine⁶, and premodern texts link both the heart protector and lifegate with the minister fire carrying out the orders of the sovereign ruler.

The lifegate

The lifegate’s functional role has remained fairly consistent since the *Nanjing*: it lodges the essence and spirit/mind (精神 *jingshen*), gives rise to the source qi (元气), and in women it holds the womb. Historically though, its location has been difficult to pin down. In the *Plain Questions* Treatise Six and *Miraculous Pivot* Treatise Five, the term 命门 *mingmen* referred to the eyes.^{27–8} This location is largely ignored today although the meaning for 命 *ming*, ‘orders’, ‘fate’, ‘life’, ‘to name’²⁹, is still applied to contemporary representations of the lifegate.

The *Nanjing* gives two locations for the lifegate. One is introduced in Issues 36 and 39 where the left kidney is the kidney and the right kidney is the lifegate. The other location is given in Issue 66, which states that the ‘moving qi’ (动气 *dongqi*) is an equivalent term for the lifegate and its source qi. In the *Nanjing*, the moving qi is located below the navel and between the two kidneys – the same location as the ‘minor heart’ (小心 *xiaoxin*). The *Plain Questions* Treatise 52 had identified an entity called the minor heart and located it in the centre of the body level with the second and third lumbar vertebrae. On the surface of the lower back, this location is level with the governing vessel acupoint GV4 (命门 *mingmen*). The *Nanjing*’s moving qi between the kidneys gives rise to the *sanjiao* and the channels, and constitutes the person’s life destiny (生命 *shengming*).

In Nathan Sivin’s opinion¹³, whether the lifegate is the eyes, the minor heart, the right kidney, the moving qi, or simply ‘an immaterial locus of [qi]’, has never been settled in the received

literature or its twentieth century revisions. By the end of the sixteenth century however, the lifegate's location was generally considered to be between the left and right kidney *zang*, that is, level with the lumbar two/three area²⁷ – the location of the *Inner Canon's* minor heart, and level with the acupoint GV4.

Sivin¹³ has also observed that over the centuries, the *Nanjing* scholars found 'several ingenious ways' to prove that the lifegate and heart protector were the same thing. The *Nanjing* commentaries described the lifegate and heart protector's functional relationships. The *sanjiao* arises from the lifegate in the lower *jiao*. It disseminates the kidney-lifegate's source qi and yin-fluids, and the lifegate fire powers their movement and transformations. In the upper *jiao*, the *sanjiao* connects with the qi structures enveloping the heart, the heart protector.

Ming (1368–1644 CE) scholar physicians defined the lifegate and heart protector association by their role in minister fire's physiological and pathogenic influences. In summing up the lifegate's importance, Zhang Jiebin (张介宾 1560–1639 CE), the author of the *Systematic Classic* (类经 *Leijing*, 1624), had emphasised the heart's connections with the minister fire and kidney-water: 'The lifegate is the root of qi and is the house of fire and water. Without it, the *yin qi* of the five viscera would fail to have its nourishing effect and the *yang qi* of the five viscera would be left unmobilized'.⁶

In women, these same upper and lower *jiao* (heart and kidney) connections are reflected in the uterine network (胞络 *baoluo*). The *Plain Questions* Treatise 33 says, the 'uterine connecting network belongs to the heart and nets the uterus'. In Chinese medicine, the lifegate holds the uterus, and because the uterus is one of the extraordinary fu, it is governed by the kidneys. Li Dongyuan (李东垣 1180–1251 CE), the author of the *Treatise on the Spleen and Stomach* (脾胃论 *Piwei Lun*, 1249 CE), explained that minister fire is the fire of the lower *jiao's* uterine network, and the uterine network connecting the kidneys and uterus also connects with the heart and upper body.³⁰ In TCM, the uterine network's role in regulating the menses is influenced by its connections with the heart and kidney qi-influences.

As the basis of the source qi, the physiological fire, and their dissemination through the *zangfu* and the channels, the lifegate's moving qi is the source of life. The *sanjiao* and channel system arising from the lifegate extends its influences to the brain and bone marrow, to the limbs and the body surface, warming the skin and the tissue spaces and textures (腠理 *coulǐ*), steaming the three *jiao*, guiding and maintaining correct qi physiology.^{6,31} The *shaoyin* (heart-kidney), the *sanjiao*-pericardium-lifegate associations, and the uterine network channels help transmit kidney *jing*-essence (water), and minister and sovereign (fire) influences between the upper and lower body. These connections ensure communication of the physiological fire of

the sovereign and minister, and the mixing of water and fire in the *sanjiao* allows life to develop.^{11, 32}

Summary

Chinese medicine's notions of physiological fire begin with the heart and kidney-lifegate axis. The heart enclosing network, heart ruler and chest centre were the envoy of the heart-sovereign; in the lower *jiao*, the minister fire that arose from the lifegate also carried out the orders of the sovereign fire. The *sanjiao* arising from the lifegate in the lower *jiao*, and the heart protector enveloping the heart in the upper *jiao* are the representatives of the minister fire and the envoys of the source qi and sovereign fire. When the *Nanjing* uses 'no form' to describe the *sanjiao* and heart protector, it assigns them a role that mediates between the person's life qi-influences and their materialisation, the body form.³³

In the Song, Chinese scholar physicians extended early concepts of physiological fire to explain the pathogenic effects of emotions and desires on the body interior. Song neo-Confucianism incorporated Buddhist ideas that associated physical heat with conscious awareness.³⁴⁻⁵ The yang movement of emotions and desires easily disturbed physiological fire, and when the sovereign fire and its envoy are agitated, the minister fire loses its root in the lower *jiao*.

Well before the Song, China's most ancient texts had recorded that the heart-mind (心 *xin*) was easily stirred by emotional and sensual influences and desires, and their pathogenic potential figured prominently in its early conceptions of illness. Perhaps more than other kinds of qi-influence, the minister fire mediates between a person's mental-emotional life and the physiological processes producing and maintaining the body form. For example, the sovereign and minister fires, which are quiet and tranquil before sexual intercourse, 'begin to stir' when the sexual urge is felt.³⁶ Desire activates the minister fire and the *jing*-essence, and minister fire activates the sexual-reproductive role of the liver and kidneys to ensure the continuation of life.³²

To illustrate how Chinese medical practice methods flow from its representations of the body, Part Two will explore the dynamics of physiological and pathogenic minister fire. Part Two will elaborate on the connections between the prenatal and postnatal aspects of physiological fire. Postnatally, the liver's (*jueyin*) management of minister fire connects with the sovereign fire of the heart and its envoy, the pericardium, the *shaoyang* facilitates the minister fire's movement between the body interior and its surface, and the paper will highlight how premodern conceptions of the minister fire and its qi influences are mapped onto the medical body.

GLOSSARY OF TERMS

<i>baoluo</i>	胞络	the uterine network, a secondary channel system connecting the heart and kidney (<i>shaoyin</i>)
<i>couli</i>	腠理	the <i>sanjiao</i> 's network of spaces and textures ³¹
<i>danzhong</i>	膻中	the <i>Plain Conversation</i> Treatise Eight's 'chest centre'; the name of the acupoint CV17
<i>dongqi</i>	动气	the moving qi between the kidneys; an alternative term for the lifegate
<i>guan</i>	官	officials; the <i>Plain Conversation</i> Treatise Eight's twelve administrative offices
<i>Huangdi Neijing</i>	黄帝内经	<i>Yellow Emperor's Inner Canon</i> (originally c. 100 BCE)
<i>jingshen</i>	精神	essence and spirit/mind
<i>jueyin</i>	厥阴	the reverting yin (one of the <i>liujing</i> /six channels), the pericardium-liver channels
<i>junhuo</i>	君火	sovereign fire
<i>liujing</i>	六经	the six channels; also known as: the six warps, and the six conformations
<i>liuqi</i>	六气	the six qi (summer heat, cold, wind, dampness, dryness, fire)
<i>mingmen</i>	命门	the lifegate, the gate of orders
<i>muxue</i>	募穴	alarm acupoint
<i>Nanjing</i>	难经	<i>Classic of Difficult Issues</i> (originally c. 100 CE)
<i>sanjiao</i>	三焦	triple burner, triple energiser (one of Chinese medicine's six yang organs)
<i>Shanghan Lun</i>	伤寒论	<i>Treatise On Cold Damage</i> (originally c. 200 CE)
<i>shaoyang</i>	少阳	the lesser yang (one of the <i>liujing</i> /six channels), the <i>sanjiao</i> -gall bladder
<i>shaoyin</i>	少阴	the lesser yin (one of the <i>liujing</i> /six channels), the heart-kidney axis
<i>shengming</i>	生命	one's 'life destiny', as embodied by the lifegate/moving qi/gate of orders
<i>shou jueyin</i>	手厥阴	hand reverting yin channel, today's pericardium channel
<i>shou shaoyin</i>	手少阴	hand lesser yin channel, the heart channel; in the <i>Nanjing</i> , the heart ruler is a branch of the heart channel

GLOSSARY OF TERMS (continued)

<i>wuxing</i>	五行	five phases
<i>wuxing</i>	无形	no form
<i>xiang</i>	相	the minister (who transmits the emperor's orders)
<i>xianghuo</i>	相火	minister fire
<i>xiaoxin</i>	小心	the minor heart
<i>xin</i>	心	heart; heart-mind
<i>xinbao</i>	心包	the pericardium
<i>xinbaoluo</i>	心包络	heart enclosing network, the <i>xinbaoluo</i> surrounds and protects the heart
<i>xinshen</i>	心神	heart-spirit/mind
<i>xinzhu</i>	心主	the heart ruler; in the <i>Nanjing</i> , the heart ruler is a branch of the heart channel, the hand <i>shaoyin</i>
<i>yangqi</i>	阳气	physiological fire
<i>yuanqi</i>	元气	source qi
<i>zangfu</i>	脏腑	the internal visceral systems; the yin and yang organ systems

Clinical Commentary

Clinical decision-making is determined to a large extent by how the medical body is conceived. The two parts of this paper draw out the physiological and medical implications of the minister fire – a type of *yang qi* influence that mediates between the body's physical, mental, emotional and sensory activities. The papers explore the dynamics of physiological and pathogenic minister fire and show how premodern conceptions of the minister fire's qi influences are mapped onto the medical body. They offer an account of how contemporary clinicians can utilise traditional notions of minister fire to interpret disorder and select appropriate treatment strategies.

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Emotions, Desires and Physiological Fire in Chinese Medicine, Part Two: The Minister Fire

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ABSTRACT

Chinese medicine's concept of qi mediates between a person's mental-emotional life and the physiological processes producing and maintaining the body form. The pathogenic potential of human emotions and desires figured prominently in China's ancient medical and philosophical texts, and more than any other type of qi, the sovereign and minister fire embody the influences and relationships between mental, emotional, sensory and physiological activities. When level and calm, the minister fire transmits the lifegate's original *yang qi* influences from the lower *jiao*; the liver, *sanjiao* and gall bladder (the *jueyin* and *shaoyang*) manage its dissemination through the body interior, and its movement between the interior and surface of the body. Contemporary traditional Chinese medicine (TCM) textbooks however rarely mention the minister fire, except as an illness mechanism that is identified with liver and gall bladder yang repletion patterns. The preferred term for its physiological influences today is the kidney *yang qi*.

The two parts of this paper examine the physiological and clinical implications of the minister fire. Part One began with the heart and kidney (*shaoyin*) relationship, as reflected in the pericardium and lifegate's association with the minister fire and their role in communicating the orders of the sovereign fire. In Part Two, the discussion turns to the minister fire's physiological influences, and the pathogenic stirring of minister fire due to emotions and desires.

KEYWORDS Chinese medicine, psychology, mind, mental health, medical body, morality

Introduction

The *Yellow Emperor's Inner Canon* (*Huangdi Neijing* c. 100 BCE) recommended the cultivation of an even temperament. An even temperament benefitted one's health and longevity because unchecked emotions and sensory desires were observed to disrupt orderly qi movements and damage one's body and person. The scholar physicians from the Song to the end of the Qing (960–1911 CE) took up this area of the ancient medical classics and extended Chinese medicine's response to the pathogenic effects of emotions and desires.

Song dynasty (960–1278 CE) neo-Confucianism merged certain basic elements from Confucianism, Daoism and Buddhism, and in the words of Charlotte Furth¹, the concept of fire became 'a symbolically charged metaphor in representations of the medical body'. For example, conscious awareness (the *shen*-spirit/mind) had been localised within the heart from ancient times and in the Song, the Buddhist association of physical heat with consciousness² influenced medical conceptions of the heart zang and its 'sovereign fire' (*junhuo*). The neo-Confucian association of physiological fire with the *shen*-spirit/mind informed Song notions of morality.

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These changes led scholar physicians to focus on ‘internal causes’ and to counsel their patients to moderate their behaviours and emotional responses.³

Although TCM textbooks today rarely mention the concept of ‘minister fire’ (*xianghuo*), premodern sources discuss the minister fire as a distinct system of qi-influences. The minister fire’s physiological role was very similar to contemporary representations of the kidney yang, the basis of the whole body’s *yang qi*-functions. In today’s TCM literature, the occasional mention of minister fire mainly consists of references to pathogenic repletion patterns such as ‘liver fire’. Depending on the individual case, the ‘stirring of minister fire’ can account for insomnia, irritability, frequent erection, ringing in the ears or blurred vision. However contemporary clinicians are more likely to interpret these manifestations as a ‘hyperactivity of liver yang’ or ‘liver fire’ pattern.

This paper will explore the concept of minister fire and its importance for Chinese medical conceptions of the body and clinical practice. The paper follows the examination of the pericardium and lifegate begun in Part One. Together, Parts One and Two clarify the nature of minister fire influences to complement the practitioner’s image of the medical body – the image that guides diagnostic and therapeutic decision-making.

The minister fire

In the *Inner Canon*, the *Plain Questions* Treatise Five differentiated between physiological fire and pathogenic fire: ‘Strong fire (壮火 *zhuanghuo*) consumes qi, and mild fire (少火 *shaohuo*) strengthens and warms the qi’.⁴ Whereas ‘strong’ pathogenic fire damages yin-fluids and disrupts qi influences, ‘mild’ physiological fire promotes *zangfu* functional activities. The sovereign and minister fire were considered mild fire.

Minister fire originates from the kidney-lifegate area and rather than consume or injure kidney-water, minister fire actually produces it.⁵⁻⁶ The term characterises its relationship with the heart’s sovereign fire, and with the heart’s role in lodging the spirit/mind. Together, the minister and sovereign fire strengthened one another, they warmed the interior visceral systems (*zangfu*) and powered the body’s life activities.⁷

Zhang Zhongjing’s (c. 142–220 CE) *Treatise on Cold Damage* and its subsequent commentaries allocated the governance of minister fire to the *shaoyang* (*sanjiao*-gall bladder), and held that minister fire inhabited the liver. In the *Treatise on Cold Damage* (originally c. 200 CE), the *shaoyang* is the hinge between the *taiyang* (bladder-small intestine) and the *yangming* (stomach-large intestine), that is, between the body surface and interior.

Zhang’s analysis of injury by external cold was complimented in the Song-Jin-Yuan (960–1368 CE) by the analysis of injury by internal heat. Liu Wansu (1110–1200 CE) had observed how the qi of extreme or prolonged emotions transformed into pathogenic heat (*wuzhi hua re*), and how internal pathogenic heat disturbed the heart-spirit/mind (*xinshen*), consumed the body fluids, the source qi (*yuan qi*) and the organs themselves.⁸ His explanations were very influential for Li Dongyuan (1180–1251 CE) and Zhu Danxi (1281–1358 CE).

The patterns of dysfunction described by Li Dongyuan involve several interior qi-systems. He described how the body’s source of physiological heat, the kidney-lifegate in the lower *jiao*, leaves its correct place when it becomes agitated. It then accumulates in the upper *jiao* where it disturbs the heart-spirit/mind, and the lower *jiao* becomes depleted and cold. If the spleen qi was depleted, the resulting dampness and heat poured downward damaging the liver, kidneys and large intestine, and further contributed to the upward stirring of minister fire. Li Dongyuan observed that the tranquillity of minister fire was easily disrupted if the spleen was already depleted, and that the ensuing hyperactivity of minister fire further consumed spleen qi. Furthermore, when minister fire stirs and flares upward, it consumes the stomach yin-fluids and the source qi, and ‘essence (*jing*) flows away’.⁹

These relationships and dynamics are the basis of Li Dongyuan’s ‘yin fire’ theory.¹⁰ Li’s account of ‘yin fire’ rests on his analysis of the pathogenic ‘stirring’ of minister fire and highlights the role of the *shaoyang* – encompassing the liver as well the *sanjiao*-gall bladder – in distributing the ‘clear yang’ throughout the body. In fact, Li’s analysis gives as much importance to the *shaoyang* (the liver, gall bladder and *sanjiao*’s management and distribution of the lifegate’s physiological fire) as he does to the spleen and stomach.¹¹

Zhu Danxi’s discussion of minister fire began with the Han medical classics and incorporated Liu Wansu and Li Dongyuan’s concepts of ‘pathogenic heat’ and ‘yin fire’.¹² He took up the *Inner Canon*’s explanation of ‘mild’ and ‘strong’ fire, and confirmed that the *Inner Canon*’s mild fire and the Tang dynasty’s (618–907 CE) minister fire were the physiological fire of the lifegate. More specifically, the lifegate’s clear *yang qi* was the source of minister fire, and it was minister fire that moved through the body driving *zangfu* transformations and life functions.

Zhu Danxi’s interpretations elaborated on minister fire’s physiological role as well as its potential for disruption and disharmony. The minister fire was the envoy and protector of the sovereign, and if sovereign fire did not stir frenetically, minister fire could not ‘but take orders and keep to its position’.¹³ Yet, the sovereign and minister fires were easily affected by things and tended to hyperactivity. The pathogenic effect of emotions

and desires was yang in nature, and any excessive mental, emotional, physical or sexual activity was thought to 'stir' or agitate physiological fire and disrupt its correct nature. Zhu Danxi concluded that 'Once the heart stirs, ministerial fire stirs too. When ministerial fire stirs, essence escapes on its own'.¹³ Sovereign and minister fire thus became not only the source of *zangfu* functions, but the bodily vitality that drove human emotions, cravings and desires.¹

Physiological fire

Premodern Chinese medicine texts consider minister fire physiology from two broad perspectives, namely the herbal (*zangfu*) and acupuncture (channel and five phase) perspectives. From the *zangfu* perspective, the kidney stores the inherited essence, and together, the kidney and lifegate embody the 'original' yin and yang. Lifegate fire is the postnatal form of the prenatal (original) yang influences: as these influences leave their source in the kidney-lifegate area they become 'minister fire'. From the channel perspective, the fire phase comprises the heart-small intestine and the pericardium-*sanjiao*. The 'split' that created two types of five phase fire defines the relationship between the sovereign (heart) and its executive expression in the upper *jiao*, where it is the minister fire of the pericardium-*sanjiao* that convey the heart-sovereign fire influences.

Three points will serve to sum up minister fire physiology so far (from Parts One and Two) and connect the two perspectives. First, in the lower *jiao* minister fire arises from the kidney-lifegate area, and the movement of minister fire influences through the *sanjiao* (the *shaoyang*) is managed by the liver and gall bladder. Second, minister fire is the yang-fire that warms and moves source qi through the *sanjiao*'s network of cavities, spaces and textures. Third, in the upper *jiao* minister fire is associated with the heart protector that envelopes the heart and conveys the radiance (*shenming*) of the sovereign fire.

The first point accounts for the importance of the kidney and liver *zang* for the physiology of the yang-fire. Together, the kidney and liver secure and manage one's inborn resources, the original yin and yang of the inherited essence. Once the minister fire leaves the kidney-lifegate area it is regulated by wood (the liver and gall bladder) and its qualities of emanation, emergence, spreading and flourishing.

The second point draws in Chinese medicine's concepts of the 'source' of life. Source qi, the origin of the living body's qi transformations, arises from the primary movement (*dong qi*) of the lifegate, and minister fire's warming and dynamic influence is derived from the original yang stored in the kidney-lifegate. Minister fire mobilises the constitutional influences of the essence (the original yin) that guide all postnatal qi functions.

The *shaoyin* (kidneys) is the origin of source qi, and the *shaoyang* (*sanjiao*) regulates the movement and dissemination of source qi.

Because the *sanjiao* arises from the moving qi and lifegate fire between the two kidneys, the *shaoyang* takes on two important characteristics for qi physiology: it is the intermediary between the source of life 'and the unfolding of life'¹⁴; and its 'pivot mechanism' administers the movement of minister fire between the body surface (*taiyang*) and the interior (*yangming*). The minister fire thus warms and nourishes the gall bladder, and the gall bladder assists liver coursing and draining (*shuxie*) to maintain smooth and uninhibited qi-movement. In this way 'minister fire warms the *couli* and envelops the entire body'.¹⁵⁻¹⁶ When the gall bladder and liver are coursed and discharging normally, the minister fire is 'unseen': it moves freely 'warming the organs and powering activity'.⁷

The third point is supported by Chinese medicine's channel system: its role connecting the *zangfu*, the sequence of qi-movement through the main channels, and the sequence of the five phase transformation and movement of qi. The sequence of qi-movement through the twelve channels shows the transformation of qi from the kidney to the pericardium (from water to minister fire), then to the *sanjiao*, gall bladder and liver. The 'executive' influences of the pericardium-*sanjiao* thus arise from the kidneys and transmit minister fire influences to the *shaoyang* (including the liver).

The five phase engendering (生 *sheng*) cycle shows how physiological fire influences are transmitted from the envoy, the pericardium-*sanjiao*, to engender earth (the spleen-stomach). The postnatal qi transformations of the spleen and stomach in turn, transform to engender the metal phase (lungs-large intestine). The five phase engendering sequence also shows the movement of qi from the kidney-bladder to the liver-gall bladder (water to wood) – the water phase engenders physiological fire, whose movement is then managed by the liver, gall bladder (*shuxie* functions) and *sanjiao* (the *shaoyang*).

The movement and management of minister fire by the *sanjiao*, gall bladder and liver allow contemporary acupuncture texts (such as 17) to incorporate the yin partner of *sanjiao*, the pericardium. The inclusion of the pericardium completes the *shaoyang* (*sanjiao*-gall bladder) and *jueyin* (pericardium-liver) 'coat and lining' (*biaoli*) channel relationships.

Chinese medicine's models of qi movement and transformation explain the living body's systemic and functional relationships, and are mapped on the body surface by its acupoint locations and channel pathways. Physiological fire can be strengthened and regulated, and pathogenic fire can be cleared using premodern conceptions and qi models. The qi emerges from its source in the lower *jiao* and follows the governing vessel (GV) upwards along

the midline of the back. The GV is the 'sea of yang', and the activities of physiological fire can be adjusted using its acupoints. GV4 (*mingmen*) lies on the midline of the back, between the second and third lumbar vertebrae and level with the interior location of the lifegate. Acu-moxa stimulation at GV4 strengthens depleted physiological fire – the kidney-lifegate yang qi, the minister fire that promotes *zangfu* functions.

The bladder channel surface pathway travels bilaterally alongside the GV to distribute *yang qi* to the *zangfu*, and the bladder *shu*-transport points strengthen and regulate their *yang qi* influences. Level with GV4 are the two kidney *shu*-transport points (BL 23): the 'mild fire' of the lifegate produces kidney water. Above BL 23 and bi-lateral to the first and second lumbar vertebral joint are the *sanjiao*'s *shu*-transport points (BL 22). *Sanjiao* arises from the lifegate-kidney area to disseminate the source qi influences, starting with postnatal qi formation in the stomach and spleen (BL 21 and BL 20). The *sanjiao*'s yin partner, the pericardium, is represented on the surface by BL 14 (bilateral to the fourth and fifth thoracic vertebrae), which lies between the heart and lung *shu*-transport points (BL 15 and BL 13), just as the fine membranes of the heart protector connected it with the heart and lungs in the upper *jiao*.

Pathogenic fire

When pathogenic, minister fire stirs and flares upwards: it scorches the fluids, consumes the qi and damages the essence. It harasses the heart resulting in mental restlessness, agitation, anxiety and insomnia.^{6,9} Other clinical manifestations include headaches and dizziness, a bitter taste in the mouth, dry throat, blurring vision, tinnitus, deafness, excessive libido, frequent erection, premature ejaculation, irritability, excess dreaming, and heat in the palms, soles and chest.

Pathogenic fire has a number of internal and external causes but the 'stirring of minister fire' is always due to internal causes. The stirring of minister fire can occur when any of the *zangfu* become overheated, and is usually precipitated by mental, emotional and physical agitation, including sexual arousal, and by any habitual or obsessive desire for the sensual stimulation of external objects. Emotions and desires such as anger and lust disturb the liver and kidney systems in particular.^{18–19} Especially since the Song-Jin-Yuan period (960–1368), Chinese medicine's scholar physicians specifically mention overindulgence in sexual activities as a factor contributing to pathogenic fire, as well as mental-emotional stress and sexual frustration.

Mental-emotional stresses were observed to destabilise minister fire and to 'constrain' liver *shuxie*.⁹ The notion of constraint (*yu*) was first discussed in the *Plain Questions* (Treatise 71) in

relation to the wood phase (liver and gall bladder), and later texts identified its effects with a pattern of signs and symptoms – the 'constraint pattern' (*yu Zheng*).^{20–1} In the Yuan dynasty (1260–1368 CE), it was Zhu Danxi who linked disordered liver *shuxie* to the constraint pattern.⁸ Since then, *yu Zheng* tends to be specific to the liver, especially when emotional factors are involved.

Yu-constraint is a major factor instigating or complicating all kinds of pathogenic changes, and may be identified in individuals who present with anger problems, agitation, anxiety, cystitis or irritable bowel syndrome.^{8,22–4} Because the liver *zang* itself, and emotions such as anger and frustration, are yang in nature, liver qi constraint destabilises minister fire and easily transforms into pathogenic fire. Because the liver channel runs through the sexual and reproductive organs, the digestive organs, chest, throat and eyes, the constraint pattern will often affect these areas. Thus, clinical manifestations can include stomach, chest and/or rib-side distention and pain, the sensation of plum-stone throat, tinnitus, anger, despondency, inability to eat, erectile dysfunction and blurred vision.²⁵

Zhu Danxi's analysis identified two main categories of internal pathogenic fire, and TCM today recognises the same two categories. The first is a repletion fire pattern from liver qi constraint transforming into fire. Constrained heat patterns are sometimes called 'hyperactive minister fire' or 'internal blazing of minister fire', but more frequently, contemporary TCM textbooks identify the pattern as 'liver and gall bladder fire blazing'.^{17,26} The second is an 'empty' fire pattern from depleted liver and kidney yin – the depleted yin cannot restrain the yang. The pattern is called 'liver and kidney yin depletion with yang hyperactivity', 'yang hyperactivity', 'vacuity fire flaming upward', or sometimes 'ascendant hyperactivity of minister fire'. The treatment strategy for the repletion pattern is to clear pathogenic fire using cool and cold natured herbs; for the depletion fire pattern, the treatment strategy is to clear heat and nourish the yin.

To prevent upward stirring of minister fire, Li Dongyuan's strategy was to focus on strengthening spleen qi. When the spleen is strong, dampness cannot pour downward and damage the kidneys and lifegate. Li Dongyuan also used stir-fried Cortex Phellodendri (黄柏 *huangbai*) as one of the ruling medicinals for pathogenic minister fire because of its known ability to drain the fire within water, and to return minister fire to its proper place. Li Dongyuan particularly noted that although it is cold in nature, *huangbai* does not injure the stomach qi or the true yang.^{13,15,27}

One of Zhu Danxi's major contributions was to develop the 'nourish yin-fluids and lower fire' strategy for the hyperactive yang and depleted yin pattern. In addition, Zhu maintained that nourishment of yin-fluids should be combined with mental tranquillity, and the 'proper control of sexual activities'.¹²

Confucianists have established the teachings of putting the heart right, restraining the heart, and nurturing the heart. All this is for the purpose of preventing fire from stirring due to frenzy (i.e., madness over personal desires). Physicians instruct (people) to keep unperturbed and indifferent (to fame or gain), to take (everything) as empty, and to hold the essence spirit [*jingshen*] in the interior¹³.

Summary

From earliest times, Chinese medicine noted the qi-influences of a tranquil mind and quiet self-possession. TCM today still identifies the emotions as factors that can damage the yin-interior. 'Excess' emotions disrupt orderly qi movement, transform into heat, and injure the interior. Pathogenic heart fire harasses the heart-spirit/mind causing agitation and insomnia; the 'fire' of the angry liver ascends and disrupts the liver and heart relationship; the 'fire' of sensual and sexual desires turns the sexual and reproductive qi of kidney yang and lifegate fire into disorderly and self-destructive forces. 'As a moral psychology of emotions, this was not a dualism of reason and passion but a complex mode of embodiment'.¹

When physiological fire is level and calm, it warms the body and powers qi transformations. The sovereign and minister fire animate the body, forming and directing its life processes and transformations. Chinese medicine's channel system links the heart with the kidneys, and the qi of the minister (kidney) and sovereign (heart) fire strengthen one another. More specifically, the minister fire energises the body's physiological activities, including the sexual and reproductive functions of the liver and kidney *zang*; sovereign fire enlivens postnatal conscious awareness, including its reception and analysis of sensory perceptions, and its mental-emotional activities.

Song-Jin-Yuan medicine retained early notions of physiological and pathogenic fire and explored their internal dynamics in detail. Song medicine explained the beneficial influence of emotional stability for the sovereign and minister fires, as well as their destructiveness when agitated, driven by desires or displaced by depletions.¹ Since the Song, Chinese medicine has linked the qi-influences of emotions and desires with interior patterns of repletion involving heat, stagnation, and the constraint of liver qi; with depletion of the kidney yin, the essence, source qi and middle qi (spleen and stomach functions); and with the displacement or inappropriate movement of minister fire.

Although minister fire is required for the healthy state of life processes and transformations, it is rarely a topic of basic theory or normal 'qi physiology' in contemporary TCM texts. To explain the functional processes related to minister fire, today's texts have reassigned minister fire's physiological qi-influences to the kidney *yang qi*. The 'stirring of minister fire', a pathological movement of internal heat, is not a major diagnostic category but is very nearly the only referent to minister fire in the literature today.

As a medical concept, qi unifies the physical body and its mental and emotional influences. It connects a person's mental and emotional life with the physiological processes and structures that produce and maintain the body form and sense of self. Moreover, qi connects human life generally, and one's self specifically, with the qi movements and transformations of our social, cultural and natural environments. Minister fire is a category of qi-influences that we may identify with the active yang qi of the kidney, and as envoy of the radiance of the sovereign heart-spirit/mind.

Clinical Commentary

Clinical decision-making is determined to a large extent by how the medical body is conceived. The two parts of this paper draw out the physiological and medical implications of the minister fire – a type of *yang qi* influence that mediates between the body's physical, mental, emotional and sensory activities. The papers explore the dynamics of physiological and pathogenic minister fire and show how premodern conceptions of minister fire's qi influences are mapped onto the medical body. They offer an account of how contemporary clinicians can utilise traditional notions of minister fire to interpret disorder and select appropriate treatment strategies.

GLOSSARY OF TERMS

<i>biaoli</i>	表里	exterior-interior; the channels' 'coat and lining' relationships
<i>couli</i>	腠理	the interstices, the <i>sanjiao</i> 's network of spaces and textures
<i>dong qi</i>	动气	the moving qi between the kidneys; an alternative term for the lifegate
<i>du mai</i>	督脉	governing vessel (GV)
<i>huangbai</i>	黄柏	Cortex Phellodendri
<i>Huangdi Neijing</i>	黄帝内经	<i>Yellow Emperor's Inner Canon</i> (originally c. 100 BCE)
<i>jing</i>	精	essence
<i>jingshen</i>	精神	essence and spirit/mind
<i>jueryin</i>	厥阴	the reverting yin (one of the <i>liujing</i> /six channels), the pericardium-liver
<i>junhuo</i>	君火	sovereign fire
Li Dongyuan	李东垣	1180–1251, author of the <i>Treatise on the Spleen and Stomach</i> , 1249
Liu Wansu	刘完素	1110–1200
<i>mingmen</i>	命门	the lifegate, the gate of orders
<i>sanjiao</i>	三焦	triple burner, triple energiser (one of Chinese medicine's yang or fu organ systems)
<i>sanjiao shu</i>	三焦俞	the <i>sanjiao</i> 's <i>shu</i> -transport points (BL 22)
<i>Shanghan Lun</i>	伤寒论	<i>Treatise On Cold Damage</i> (originally c. 200 CE)
<i>shaohuo</i>	少火	mild fire; the <i>Inner Canon</i> 's mild physiological fire
<i>shaoyang</i>	少阳	the lesser yang (one of the <i>liujing</i> /six channels), the <i>sanjiao</i> -gall bladder
<i>shaoyin</i>	少阴	the lesser yin (one of the <i>liujing</i> /six channels), the heart-kidney axis
<i>shen</i>	神	spirit/mind
<i>shenming</i>	神明	the radiance of the <i>shen</i> -spirit/mind; brightness; intelligence
<i>shenshu</i>	肾俞	the kidney <i>shu</i> -transport points (BL 23)

GLOSSARY OF TERMS (continued)

<i>sheng</i>	生	engender; life
<i>shuxie</i>	疏泄	coursing and discharge; the liver qi-functions that maintain the smooth flow of qi
<i>wuxing</i>	五行	five phases
<i>wuzhi</i>	五志	the five minds (also, five dispositions or emotions)
<i>wuzhi hua re</i>	五志化热	the five emotions transform into heat
<i>xiang</i>	相	the minister (who transmits the emperor's orders)
<i>xianghuo</i>	相火	minister fire
<i>xin</i>	心	heart; heart-mind
<i>xinshen</i>	心神	heart-spirit/mind
<i>yang qi</i>	阳气	physiological fire
<i>yuan qi</i>	原气	source qi
<i>zangfu</i>	脏腑	the internal visceral systems; the yin and yang organ systems
<i>zhuanghuo</i>	壮火	strong fire; the <i>Inner Canon</i> 's pathogenic fire
Zhang Zhongjing	張仲景	c. 142–220 CE, author of the <i>Treatise on Cold Damage and Miscellaneous Disorders</i> c. 200 CE
Zhu Danxi	朱丹溪	1281–1358, author of the <i>Extra Treatises Based On Investigation and Inquiry</i> , 1347

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Book Reviews

Close to the Bone (3rd edition) – The Treatment of Musculo-Skeletal Disorder with Acupuncture & Other Traditional Chinese Medicine

By David Legge
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ISBN: 9780957739222

Twenty-one years after the first edition of this book, David Legge has substantially revised and updated his text on musculoskeletal acupuncture. Gone is the spiral bound format of the previous two editions to be replaced with a 338 page hardcover textbook. This book is written to address the perceived lack of attention to musculoskeletal disorders in many acupuncture courses in the West. The fundamental tenant of this book is that the Chinese medical model, while useful to understand the underlying cause and nature of musculoskeletal conditions, lacks the tools to accurately identify the location, severity and prognosis of these conditions. This gap can be filled by good palpation and examination techniques and sound bio-anatomical knowledge.

The book is organised into three sections: *The Chinese Medical Framework*; *The Pathoanatomical Framework*; and *A Regional Survey*. Section one reviews basic Chinese medical theory targeting Chinese medicine neophytes and builds to a focus on Chinese medical pathology. Generic acupuncture and herbal treatment for various underlying pathological categories relevant to musculoskeletal disorders are outlined. Included in this section is a 38 page discussion of the *Jingjin*, a rarely discussed group of secondary channels concerned with treating painful musculo-tendinous conditions and the subject of a separate book by the author.

Section two considers the body in terms of the type of tissue involved and the nature of the pathology from a biomedical perspective. A framework for case taking, examination and diagnosis is provided followed by a systematic overview of disorders and treatment of the muscles, tendons, joints, and nerve compression. The relationship between myofascial trigger points and *Asbi* points is discussed along with needling methods to treat them. These are often the most important points in musculoskeletal acupuncture and it should be noted that these points are the focus of the 'dry-needling' movement.

Section three comprises nearly two-thirds of the book and examines disorders by body region. Each region is considered from both a Chinese medicine and anatomical perspective. Useful points are discussed along with appropriate physical examination and any special tests that are necessary for differential diagnosis. Common disorder for the head and neck; thorax; shoulder; elbow; forearm wrist and hand; low back; hip and buttock; knee; and leg, ankle and foot are differentiated and discussed. Treatment suggestions include acupuncture, moxibustion, cupping, exercises and herbal medicine. Extensive detail on identifying and selecting suitable *Asbi* points/trigger points is provided and this is a strength of this book. Recommendations on treatment frequency and prognosis set this book apart from some more academic texts and facilitate its intended use as a clinical manual.

The bibliography lists a short set of reference books and web links. An appendix listing the ingredients of the guiding herbal formulae would have been a valuable addition. An ingredient list is all the more important when formulae such as *Xiao Huo Luo Dan* and *Zhen Wu Tang*, each which contain *Fu zi* are listed – while *Fu zi* may be available in some markets it is restricted in Australia. What does the author substitute for *Fu zi*? These are minor criticisms overall as the book fills a valuable gap and allows Chinese medicine practitioners to easily incorporate a bioanatomical understanding of musculoskeletal disorders into their practice.

Close to the Bone is an essential text for both students and practitioners who seek to provide effective treatment for musculoskeletal disorders. A bioanatomical understanding of these disorders is also essential to be part of and communicate with the health team which supports athletes today. Practitioners who have an earlier edition could justify updating to this one with its improved attention to diagnosis and examination and discussion of myofascial trigger points. *Close to the Bone* supplements treatment focussed on underlying Chinese medical pathology with pragmatic and specific local treatment, and reminds us all that Chinese medical theory and the biomedical model can at times work very well together.

Reviewed by Stephen Janz

A guide to evidence-based integrative and complementary medicine

By Vicki Kosirilos, Luis Vitetta, and Avni Sali

Elsivier, 2011

ISBN 9780729539081

Picking up this book, any complementary medicine practitioner would have two questions: 1. What is integrative medicine? and 2. Is it possible to have an evidence-based approach to complementary medicine?

The book does answer these questions. In the Introduction, the authors define that integrative medicine is 'the practice of medicine in a way that relates to complete patient care', and includes 'practices currently beyond the scope of conventional medical teaching'. The authors continue to explain that the purpose of the book is to 'expand its (conventional medicine) boundaries, and to build a scientific foundation for integrating less well understood approaches...' I applaud the efforts and courage of the authors for pushing the boundaries and for bringing holistic practice back into medicine.

The book focuses on non-pharmaceutical interventions, including life style, mind-body medicine, stress management, dietary advice, acupuncture, herbal remedies, hypnosis, supplements, and other forms of complementary medicine. So in this book, integrative medicine refers to medical practice that incorporates complementary medicine in patient care.

How about the second question? There is much debate about whether evidence-based medicine, at its core being a reductionist approach to medicine, can be applied to assess the effect of complementary medicine, which is holistic in its nature. This book avoids this hard question, instead focuses on the results of clinical research, from systematic reviews to randomised controlled trials

and case reports. For every common health condition, the authors outline the possible complementary therapies and their levels of evidence. Obviously, as a health practitioner, I would be more likely to adopt the therapy that has the highest level of evidence. So in some way, it is possible to adopt evidence into practice of integrative or complementary medicine.

However, as the authors warn, the book does not intend to be prescriptive, and the practitioner and patient have to choose suitable therapies individually. Here comes the main drawback of the book: it does not explain how to choose the therapies individually. The authors cannot be blamed for this. Most trials in complementary medicine have too small a sample size to allow determining the optimal treatment regime, such as dose, duration and frequency.

Having addressed the two main questions, I can now give a summary of the book. It has three parts and 38 chapters. Part 1 defines the types of therapies included in the book; Part 2 details 34 common health conditions; and Part 3 discusses herb-nutrient-drug interaction and adverse reactions to complementary medicine. The health conditions include respiratory diseases (e.g. asthma), mental health (depression), various forms of cancer, metabolic conditions (diabetes), pain (fibromyalgia), women's health (menopause), cardiovascular diseases, and conditions of other systems. Each chapter starts with an introduction to the condition and a wide range of causes, from organic factors, life style factors, nutrient deficiency, to hormonal imbalance, infection and many others factors. This is then followed by a range of complementary treatment options, which are all supported with data from clinical studies. Information

about how the condition is treated medically is not presented.

There are two very useful tables to each chapter: one outlines the level of evidence of each treatment option; the other is a handout for patients, which lists all pieces of advice. For me the handout is way too complicated for patients to understand. But it is a great resource, from which every practitioner can develop one for their patients individually.

Furthermore, purchasing a hardcopy of the book gives you online access so that you search through the book quickly online. This is particularly helpful if you want to get a quick answer.

The authors are two prominent integrative medicine practitioners in Australia (Dr Vivki Kosirilos and Prof Avni Sali) and one expert researcher (A/Prof Luis Vitetta). Practitioners with various backgrounds have contributed to the book, and the content has been reviewed by a panel of medical practitioners and pharmacists.

Overall, I have found the book user friendly and informative. It is definitely a source from which I will draw information. This is a book that every health practitioner should have, particularly Chinese medicine practitioners, as most of us are not familiar with the various forms of complementary medicine that are outside of our training. But use the information with caution as each patient ought to be treated individually, so as to reflect the true spirit of integrative and complementary medicine.

Reviewed by Zhen Zheng

Pathomechanisms of the lung. Fei bing zhi bing ji.

By Li Zheng-Hua and Yan Shi-Lin
 Elsevier, 2011
 ISBN 9780912111872

Part of a series of offerings on the pathomechanisms of the five viscera, this book clearly offers a contemporary mainland Chinese approach to understanding lung patterns of disharmony. The authors do this by firstly offering statements relating to normal physiological function and then outline the kind of symptomatology that may be found should the pattern manifest. Reference to early Chinese medica are scattered throughout the text and used as a means of enriching the discussion about the patterns and their manifestation. The authors arrange the chapters into patterns that reflect pathomechanisms of repletion and vacuity. In addition, the authors provide special emphasis on lung yang vacuity and lung blood vacuity. A useful short summary is included at the end of each section. Treatment strategies are clearly aimed at the herbalist. No reference to acupuncture protocols is provided.

The text is a translation from the Chinese by westerners for western consumption. The original text precedes each translated section. Like many other English speaking practitioners, this reader is not fluent in Chinese and makes no comment on the veracity of the translation itself. Why the Chinese text is included in the offering is not made clear. If, say, the text set out to explore the original text as a means of understanding Chinese medical ideas such an inclusion would seem justified. One obvious question is, does the inclusion of the Chinese enhance the discussion on pathomechanisms? Continuing along the theme of translation, reference to source material usually to early Chinese medical texts used as a way of enhancing

discussion is given and presented in pinyin. However, the bibliography is offered is only in Chinese, which means the reader will not be able to locate the reference. Why the bibliography is only presented in Chinese and not translated, as offered in text, is not made clear. Was it an oversight?

The translation of Chinese medical terms follows Wiseman and for some could be seen as somewhat controversial as it differs from other English texts. Thus the reader is exposed to such terms as, 'impaired depurative downbearing,' 'impaired diffusion and downbearing,' 'counterflow ascent,' 'impaired diffusion of upper orifices' or 'lung cold with congealing blood.' Whilst many readers may be unfamiliar with such terms one could 'read between the lines' in their attempt to understand the meaning and then relate to a similar lung pathologies but labelled differently.

At the end of each section, the authors offer a neat and concise summary, which is useful. However, it does take a bit of an effort to see how the summary is linked to the in-text discussion.

What makes this book interesting, different and worthy to read is the way in which lung pathologies are organised and explained. The language used is evocative. For instance, the introductory paragraph of chapter two begins:

The lung is the 'florid canopy'. It is positioned in the upper burner and occupies the highest place. Under normal circumstances, the lung's qi dynamic performs depuration and downbearing. When the lung qi

depurates and downbears, it absorbs clear qi, distributes the subtle essences downward, distributes water and essence to the four directions, and moves simultaneously in all five channels. Thereby it safeguards the uninhibited flow in the pathways of qi and in the waterways. It enables *yang qi* to warm the five viscera, six bowels, four limbs, and hundred bones and allows them to be enriched by the fluids. At the same time, it is able to cleanse the lung connector and expel waste matter. As a result, all the viscera are naturally quiet.

In so far as treatment strategies, the book is tilted toward the application of herbal formulae. Given that the text is presented in a logical, concise manner and targeted to the clinician, it does seem strange that herb dosages are omitted.

Finally, the inclusion of pathologies that speak of yang and blood impairment is 'new' and different. Most available contemporary texts do not speak of such patterns. The authors do acknowledge this and offer a case for the inclusion of such patterns. The issue of lung yang and lung blood disorders nevertheless is worthy of further debate and exploration.

The book is relatively inexpensive and a welcome addition, given that Chinese medical texts are often expensive. More importantly, and putting aside some of its limitations, this book is worth buying! Why? It demonstrates how the 'same thing' can be said in different ways thereby enriching our understanding of Chinese medical ideas.

Reviewed by Peter Ferrigno

Research Snapshots

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Dr Peter Ferrigno PhD

RCT OF ACUTE PSORIASIS ACCORDING TO BLOOD-TYPE (XUE FEN) SYNDROME DIFFERENTIATION

BACKGROUND: The cause of psoriasis remains unclear. Recently, its incidence has shown an increase. Psoriasis often relapses after treatment which can result in great physical and mental impact on the patients.

OBJECTIVE: This randomised controlled trial (RCT) is aimed to evaluate the efficacy and safety of integrated Chinese-Western Medicine on acute psoriasis.

METHOD: One hundred outpatients met the eligibility criteria of typical clinical manifestations of acute psoriasis: erythema, papules, or erythema covered with silvery white scales accompanied by itching. Forty four patients were at the initial acute phase and the remaining patients had a sudden relapse from remission in chronic psoriasis. Participants were randomised to the treatment group (50 patients) or control group (50 patients).

Both groups were administered daily an intravenous infusion containing 40 mL Glycyrrhizin in 250 mL of 5% glucose solution. They also received topical application of Tacalcitol Ointment twice a day

The following oral Chinese herbal decoctions were given to the treatment group only, based on Xue Fen syndrome differentiation:

1. Blood heat syndrome ($n = 16$): Modified *Tubuai* Decoction (*Tufuling* 30 g, *Shenghuaihua* 30 g, *Gancao* 9 g).

2. Blood dryness syndrome ($n = 21$): *Jiawei Siwu* Decoction (*Chuanxiong* 15 g, *Danggui* 15 g, *Baishao* 12 g, *Shudi* 12 g, *Huangqin* 15 g, *Fuping* 12 g, *Huaishanyao* 15 g, *Baizhu* 15 g, *Zhibeshouwu* 15 g, *Hongzao* 6 g).

3. Blood stasis syndrome ($n = 13$): *Chishao Ezhu* Decoction (*Sanleng* 15 g, *Ezhu* 15 g, *Chuanxiong* 15 g, *Xiangfu* 15 g, *Baishao* 15 g, *Chuanshanjia* 10 g, *Taoren* 10 g, *Guizhi* 10 g, *Fuling* 10 g, *Chishao* 12 g, *Niuxi* 20 g, *Shenghuangqi* 20 g, *Shuizhi* 6 g, *Tusizi* 30 g).

All patients in the treatment group received the following Chinese medicated bath every two days for three weeks: *Shengceboye* 100 g, *Tougucao* 100 g, *Baixianpi* 50 g, *Dazhaojiao* 50 g which was adjusted according to individual syndromes. Blood heat syndrome had additional *Machixian* 50 g, *Baijiangcao* 50 g, *Pugongying* 50 g; Blood dryness syndrome *Kushen* 50 g, *Difuzi* 50 g; and Blood stasis syndrome *Mudanpi* 50 g, *Shengaiye* 50 g. Herbs were seeped in 5000 mL water for 30 minutes.

OUTCOME MEASURE: Change in lesion area was measured according to the criteria specified in Standards of TCM Syndrome Diagnosis and Assessment of Efficacy.

1. Cure: lesions completely cleared or reduction of area $\geq 95\%$
2. Marked effect: reduction of lesion area $\geq 80\%$ but $< 95\%$
3. Effective: reduction of lesion area $\geq 50\%$ but $< 80\%$ and
4. No Effect: reduction of lesion area $< 50\%$.

RESULTS: Lesion reduction was statistically significantly greater in the treatment group than in control group on overall efficacy: 94% vs 74% ($p < 0.01$). Of 50 patients in the treatment group, 47 responded while 37 patients responded to the control intervention in the same sample size as the treatment group. No serious adverse events were found in either group. Minor adverse events included dryness of mouth and skin, mild scaling and some itching.

CONCLUSION: Chinese herbs that clear heat, cool blood, resolve toxins, and move blood may transform macules and benefit patients with psoriasis. Tacalcitol inhibits abnormal proliferation and differentiation of epithelial cells, promotes normal differentiation of epithelial cells as well as having immune regulatory and anti-inflammatory actions. The combination of Chinese herbs with Western medication may improve curative effect on psoriasis in the acute phase without serious adverse events.

COMMENT: Psoriasis is a resistant skin disorder that often relapses, so new treatments are needed. This study demonstrates that integrated Chinese-Western therapy is effective and safe but there are some issues in the experimental

design. Since there is no placebo for the Chinese herbal medicine treatment, the improvement in this group could be due to the addition of an extra intervention. Also, no separate results are given for the three syndrome groups so we do not know whether this approach is effective in some syndromes but not for others. All details of intervention and measure, such as therapy course of

each intervention and measure time of each measure, should be completed and stated in the method item. However, some relevant information was not clarified in the article, which impacts the accuracy of the study. According to Zhu Renkang, a famous traditional Chinese medicine expert in psoriasis, the aetiology and pathogenesis relates to blood heat at the onset and in acute

relapses. Glycyrrhizin is commonly used for psoriasis outpatients in China and has been the subject of a number of clinical studies.

Li QS. A clinical study of Chinese Medicine Integrated Western Medicine for acute psoriasis. Journal of Emergency in Traditional Chinese Medicine. 2011; 20(2):214–5.

Shiqiang Deng and Brian May

TAI CHI EXERCISE FOR TREATMENT OF PAIN AND DISABILITY IN PEOPLE WITH PERSISTENT LOW BACK PAIN: A RANDOMISED CONTROLLED TRIAL

The study is a two-armed parallel randomised clinical trial to investigate the efficacy of a 10 week Tai Chi (TC) program on sufferers of persistent non-specific low back pain. The 160 participants were screened and then randomly allocated to either a TC intervention ($n = 80$) or a waiting list control group ($n = 80$). The results from this study showed that those who received the TC intervention had a significantly lower score of perceived pain through the primary measure of the bothersomeness of pain and secondary outcome measures using Roland-Morris Disability Questionnaire, Pain Disability Index and the Quebec Back Pain Disability Scale.

The study was conducted in Sydney, New South Wales, Australia and over a period of two years, with initial recruitment starting in July 2008 and the final outcomes collected in September 2010. All participants for this study were recruited from the Sydney metropolitan area and interventions held within community venues, not clinical facilities, in Sydney. Ethics for the trial was approved by the University of Sydney Human Research Ethics Committee.

This study is the first RCT of TC for

sufferers of persistent low back pain symptoms and the significance of results found this study showed that TC is a valid and successful treatment for low back pain. The study stated that 75% of interviewed participants reported that the treatment effect met their requirements. However the results were also similar to previous meta-analysis of 14 RCTs comparing exercise to non-exercise groups for the treatment of low back pain¹, indicating that the results from this study can only show an equivalency to standard exercise for low back pain. The differentiation between exercise and TC lies in that the term TC is an umbrella term referring to a variety of ancient Chinese mind-body practices, such as meditations, qigong and martial arts choreography, with the emphasis to promote longevity and health.^{3–4}

The methodology for this study has several strengths as well as several limitations, whilst the strengths further validate the reliability of the results collected, many of the limitations do reflect negatively on the affirmative outcomes from the study.

The strength of this RCT lies in the large sample size to give credible data regarding the effects of the tai chi on back pain. This number allows the statistical data to be analysed at a greater statistical power further validating the results obtained. The use of a checklist for the TC trainers and assessment of trainers ensured the study protocol was

adhered to and provided a good method to ensure reliability and consistency of the intervention administered.

One of the limitations with the experimental design was the exclusion criteria for the volunteers that only relate to spinal pathology, surgery or contraindications to exercise. There was no attempt to differentiate the aetiology of the back pain or consideration to other ailments or medical conditions, either physiological or somatoform which might affect an individual's perception of back pain.

Whilst the two armed parallel RCT is a valid design, it does bring up the issue of specifying if the outcomes achieved were from a TC specific intervention or exercise in general, hence the need of a third arm of active control of exercise for participants to differentiate if there is any efficacy with the non-exercise aspects of TC practice.

The experimental design expected both groups to continue their usual health care for the duration of the trial; as such the modality and frequency of the health care received should have been listed to ensure there were no statistically significance between groups. Furthermore there was no process in place to evaluate if participants in the TC group exclusively practised TC or if they undertook other forms of exercise.

In terms of the dosage of TC intervention, there was a total of 18

sessions with each session lasting 40 minutes, a total of 720 minutes. When this dosage is compared to the findings from the 2008 report,² the dosage given is much lower than the average (2877 minutes) dosage of TC trials from 1996 to 2007. Whilst this figure gives no indication of the dosage required for a clinical outcome to occur in TC it does indicate that a lower dosage can be enough to initiate a change in outcome and raises the question whether or not results would be more significant if a longer dosage was given.

Unfortunately the study did not incorporate any measures for any follow up and outcome measures were only taken at baseline and at the conclusion of the trial. As the

authors stated in their discussion the results obtained can only be deemed as short term without validation of follow up data.

Hall AM, Maher CG, Lam P, Ferreira M, Latimer J. Tai chi exercise for treatment of pain and disability in people with persistent low back pain: A randomised controlled trial. Arthritis Care Res (Hoboken) 2011;63(11): 1576–83.

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Shuai Zheng

A MODEL OF INTEGRATIVE CARE FOR LOW BACK PAIN

AIM: A new and interesting take on exploring low back pain this pilot research project aims to test the view that coordinated access to multi-disciplinary teams of health professionals including licensed acupuncturists working in a hospital setting would enhance clinical outcomes for adults with low back pain when compared to offering patients usual care. Usual care was defined as subjects treated in their usual primary care facility, which typically included pharmaceuticals such as NSAID's

and muscle relaxants, and bed rest, education, physical therapy and activity alteration. In addition to acupuncture, integrative care included a broad range of complementary alternative medicine (CAM) practitioners.

DESIGN: The pilot project was a randomised trial comparing an individual program of integrative care plus usual care to usual care alone for adults with low back pain.

RESULTS AND CONCLUSIONS: Early findings suggest that it is relatively easy to assemble a team of integrative

care practitioners; that CAM treatment is safe and that such an approach showed a promising trend for the benefit of treating patients with persistent low back pain. The findings also hint at the likelihood that such an integrative care approach is very likely to contribute to significant savings to a national health care budget.

Eisenberg, D. M. et al (2011) 'A model of integrative care for low back pain'. Journal of Alternative and Complementary Medicine. 18(4):354-362.

Peter Ferrigno

AACMAC Perth 2011: Selected Conference Abstracts

EDITOR'S NOTE: The 2011 Australasian Acupuncture and Chinese Medicine Association Annual Conference (AACMAC) was held in Perth. 78 abstracts were submitted, and 50 were for peer-review. An assessment panel, consisting of three Editorial Board members and one International Advisory Committee member, was established to assess the quality of each abstract and selected those meeting the AJACM standards for publication in this journal. The panel was delighted to see abstracts with a great variety of content. Unfortunately some only presented a Background and Hypothesis without Methods or Results; and some only included the outline with no data. We finally selected 9 abstracts that presented original research with data. We enjoyed reading them and delighted in the research quality, and hope you feel the same.

Treatment of chronic hepatitis B with TCM in China

By Jianjie Chen

Background: The paper aimed to explore the diagnostic criteria path and criteria of traditional Chinese medicine (TCM) for Chronic Hepatitis B (CHB). **Methods:** CHB patients with confirmed anti-virus markers were randomly assigned to three groups to receive Entecavir and TCM syndrome differentiation treatment; Entecavir and TCM formula treatment and Entecavir monotherapy. Patients without confirmed anti-virus markers, with interferons or nucleoside analogues drug allergy or refused to use interferons and nucleoside analogues were randomly assigned to two TCM groups to receive TCM syndrome differentiation treatment or TCM formula treatment. ALT, HBV DNA and HBeAg status were tested every three months for one year? **Results:** 1348 patients were enrolled, of which 435 patients finished one year of treatment. Five TCM syndrome patterns were identified by analysing the symptoms using cluster analysis, factor analysis and expert experience. They were damp-heat in the interior, liver-stagnation with spleen-deficiency, deficiency of the liver and kidney, yang deficiency of the spleen and kidney, and qi stagnation with blood stasis. In patients with confirmed anti-virus markers, Entecavir combined with TCM syndrome differentiation treatment was more effective than other treatments in inhibiting HBV-DNA replication, and increasing the rates of HBeAg negative conversion and HBeAg seroconversion. Furthermore, in patients without confirmed anti-virus markers, the TCM syndrome differentiation treatment was more effective than TCM formula treatment. **Conclusion:** TCM syndrome differentiation treatment may have antiviral effects that can benefit patients with or without anti-viral therapy.

The effectiveness of acupuncture and Chinese herbs as treatments for depression

By Zhiwei Shen; Zaza Lyons; Gill Van der Watt

Background and aims: Acupuncture is one of the more commonly used alternative treatments for depression. Despite an increase in research over the last few decades, evidence of its effectiveness remains inconclusive. Furthermore, research into the use of Chinese herbs is limited. The aim of the study was to assess the effectiveness of acupuncture and Chinese herbs as treatments for mild and moderate depression. **Methods:** Eligibility to participate in the study was determined by a score of 20+ on the Kessler 10 (K10). Participants chose either acupuncture, or acupuncture combined with Chinese herbs (combined). All participants had 10 sessions of acupuncture over five weeks. Those in the combined group also took herbs for five weeks. The K10 and the Beck Depression Inventory (BDI) were administered at baseline, at the end of active treatment and three months from baseline. **Results:** There were 19 participants in the study. 12 were in the combined group, 7 in the acupuncture group. Mean increase in K10 scores from baseline to post treatment was 35% (range 2-60%); mean BDI score was 39% (range 13-100%). At three months, the scores for all participants on both the K10 and the BDI remained lower than baseline, but had increased compared with post treatment follow-up. Participants in the combined group had the greatest improvement compared with acupuncture only: K10 39% vs 25%; BDI 62% vs 48%. **Commentary:** This small exploratory study shows that acupuncture is an effective treatment for depression. Combined with Chinese herbs the effectiveness is increased, but treatment benefits diminish over time.

Chinese medicine patterns and integrative diagnostic approaches of type II diabetes

By Hong Xu

Chinese Medicine has differentiated type II diabetes into many patterns of disharmony. Individually tailored treatment strategies could be provided to address the patterns and improve the general health conditions for patients. Many biomedical diagnostic tools have been used in contemporary medical practise to evaluate the severity of the disease and the effectiveness of treatments. This review examined the relationships of different diagnostic approaches. Chinese medicine pattern differentiations of diabetes have demonstrated certain degrees of regularity when linked with biomedical test results, e.g. patients with kidney deficiency and blood stagnation have a higher cholesterol level compared with patients with yin deficiency; high blood viscosity is commonly found in patients with blood stagnation; yin deficiency patients could have a higher insulin level than yin and yang deficiency patients; yin and yang deficiency is related to reduced thyroid function; yin deficiency patients could have a higher plasma cortisol level than qi and yin deficiency or yin and yang deficiency patients; kidney deficiency and blood stagnation is related to lower levels of Zn, Cr, Mg and Mn. A simple pattern could develop into a complex pattern. Understanding and studying those relationships could result in development of an integrated traditional and contemporary diagnostic approach to type II diabetes and provide more appropriate instruments to evaluate the effectiveness of Chinese medicine.

The effect of acupuncture treatment compared to sham laser for lateral epicondylalgia: results from a randomised controlled pilot study

By Christopher Zaslowski; Peter Meier; Sean Walsh; Deirdre Cobbin; Christine Berle; Seong Leang Cheah

Lateral elbow pain is a painful common musculoskeletal condition that affects approximately 1-3% of the population at any given time and is associated with the degeneration of the common extensors tendon where it inserts on the lateral epicondyle of the elbow. A randomised controlled pilot study was undertaken at the University of Technology, Sydney to determine whether acupuncture could relieve pain and improve function associated with this debilitating condition. Twenty participants were randomly allocated to receive either a standardised acupuncture protocol ($n = 11$) or sham laser ($n = 9$) over 10 sessions. Outcome measures were pressure pain threshold (PPT) measured at designated acupoint sites by algometry, the McGill pain questionnaire, the disability of hand and shoulder (DASH) questionnaire and a visual analogue scale relating to pain. While no significant changes were found at

the completion of the ten sessions or the one month follow up period for the PPT measures, significant improvements were reported by the acupuncture group for both the McGill pain questionnaire ($p < 0.03$) and the DASH ($p < 0.02$) at the one month follow up but not for those receiving the sham laser. In addition blinding efficacy and the experience of *deqi* reported by the acupuncture recipients were also evaluated. The results indicate that acupuncture may be helpful in alleviating pain and improving function but the small participant number involved preclude definitive conclusions. A larger sufficiently powered study is required. This presentation will discuss the results as well as some of the issues when conducting a clinical trial using acupuncture.

Traditional Chinese herbal medicine in the management of female Infertility: a systematic review

By Karin Ried; Keren Stuart

Background: Infertility affects 15% or three million of couples in Australia. Assisted Reproductive Technologies, including In-Vitro-Fertilisation (IVF) result in about 23% clinical pregnancies and 17% live births. Aims: To assess the effect of traditional Chinese herbal medicine (CHM) in the management of female infertility and on pregnancy rates compared with western medical (WM) treatment. Methods: We searched the Medline and Cochrane databases and Google Scholar until February 2010 for abstracts in English of studies investigating infertility, menstrual health and TCM. We undertook meta-analyses of (non-)randomised controlled trials (RCTs) or cohort studies, and compared clinical pregnancy rates achieved with CHM versus WM drug treatment or IVF. Results: Eight RCTs, 13 cohort studies, three case series and six case studies involving 1851 women with infertility were included in the systematic review. Meta-analysis of RCTs suggested a 3.5 greater likelihood of achieving a pregnancy with CHM therapy over a four-month period compared with WM drug therapy alone (odds ratio=3.5, 95%CI: 2.3, 5.2, $p < 0.0001$, $n = 1005$). Mean (SD) pregnancy rates were $60 \pm 12.5\%$ for CHM compared with $32 \pm 10\%$ using WM drug therapy. Meta-analysis of selected cohort studies ($n = 616$ women) suggested an mean clinical pregnancy rate of 50% using CHM compared with IVF (30%) ($p < 0.0001$). Discussion: Our review suggests that management of female infertility with Chinese Herbal Medicine can improve pregnancy rates two-fold within a four-month period compared with standard fertility therapy, including IVF. Assessment of the quality of the menstrual cycle, integral to TCM diagnosis, appears to be fundamental to successful treatment of female infertility.

Non-effect of manual needle acupuncture on experimental pain parameters in healthy young men

By Sokcheon Pak; Peter Micalos

Objective: The purpose of this study is to assess the effect of manual acupuncture on experimental pain parameters in healthy participants. **Design:** The experimental design was a repeated measures three group Pre and Post procedure. All subjects participated in a Control, Sham and Acupuncture procedure, separated by one week, in a counter-balanced sequence to forestall an order effect. **Settings/Location:** Data were collected in a laboratory environment. **Subjects:** The participants included 12 healthy young males (mean age 21.3 ± 2.6 years; height 183.8 ± 5 cm; weight 77.7 ± 9.5 kg). **Interventions:** The Control procedure was comprised of assessing the experimental pain parameters before and after a quiet rest for 20 minutes. The Sham procedure was performed with needle inserted bilaterally 1-1.5 cm outside each acupoint. The Manual acupuncture procedure was performed at two bilateral acupoints of LI 4 *Hegu* and ST 44 *Nei Ting*. **Outcome measures:** Pain parameters assessed included the Pain threshold, Nociceptive reflex threshold and Nociceptive reflex amplitude. **Results:** Repeated measures ANOVA between Pre and Post Control, Sham and Acupuncture procedures for Pain threshold, Nociceptive reflex threshold and Nociceptive reflex amplitude revealed no significant difference. **Conclusion:** Manual acupuncture at bilateral acupoints LI 4 and ST 44 did not show a change in Pain threshold, Nociceptive flexion reflex threshold or the Nociceptive reflex amplitude in healthy participants.

Semi-self-administered ear-acupressure for persistent allergic rhinitis: a randomised sham-controlled trial

By Claire Shuiqing Zhang; Charlie Changli Xue; Angela Weihong Yang; Anthony Lin Zhang; Yunying Li; Jiyan Xia; Cliff Da Costa; George Owe-Young; Francis Thien

Background: Seasonal allergic rhinitis (SAR) is a common condition that affects approximately 16% of Australian population. Acupuncture has been demonstrated effective for symptomatic treatment of allergic rhinitis (AR). Acupressure is used clinically as an alternative to acupuncture. However, the efficacy and safety of ear-acupressure (EAP) for SAR is unknown. **Objective:** To evaluate whether EAP is effective for AR in terms of symptom severity and quality of life. **Methods:** This semi-self-administered randomised, single-blind, sham-controlled trial was conducted in 2008 in Melbourne, Australia. Participants with SAR were randomised to receive either real or sham EAP treatment once a week for eight weeks. Participants were instructed to administer EAP pressure three times daily. Symptom severity and quality of life were evaluated before and after the treatment period. Intention-to-treat was applied

to data analysis. **Results:** Sixty-three participants (Female: 34, Male: 29) were allocated to real ($n = 31$) and sham EAP ($n = 32$) groups. Eight participants discontinued due to time constraints. After eight-week treatment, symptom severity was significantly reduced in the real group compared to sham treatment in terms of the total nasal symptoms ($p = 0.02$) and the global nasal and non-nasal symptom ($p = 0.04$). Regular activities at home and work were also significantly improved in real EAP group compared to control ($p = 0.04$). Both real and sham EAP treatments were well tolerated by participants. No severe adverse events were reported. **Conclusion:** These findings suggested that semi-self-administered EAP was effective and safe for SAR patients. Further study with a larger sample size is needed.

Clinical approaches to treatment with acupuncture for refugees who have been victims of torture and trauma

By Naomi Absehouse; Kate Levett

Background: The NSW Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS) was established to assist refugees to Australia. Acupuncture and Chinese herbal medicine have been useful for the treatment of PTSD and was considered an effective intervention for this population. **Methods:** An acupuncture clinic was established at STARTTS Auburn in 2005. Clients were referred on a needs basis for various pain syndromes and PTSD symptoms. They were often accompanied by interpreters. Treatment aimed to optimise physical and psychological function. **Outcomes:** Trust, rapport and safety were paramount in treatment delivery. Cultural and social norms influenced delivery, as did the type of trauma and torture experienced. Symptoms such as flashbacks, nightmares, irritability, insomnia, pain syndromes and the impacts of sexual assault were common. Qualitative outcomes via interview, was ascertained for nearly 100 clients over a five-year period. **Results:** Patients reported highly favourable responses to the clinician. Reports derived from interviews evidenced symptom alleviation and restoration of function. Treatment gains were greatest in the initial period, with a subsequent plateau. Psycho-emotional effects for the practitioner and the impact of interpreters on treatment outcomes were important. **Conclusions:** The greatest benefit for the treatment of symptoms of torture and trauma for refugees was gained in the initial stages of treatment. A medium term course of treatment, and using interpreters mindfully, is recommended. Practitioner awareness of increasing general resilience, practicing self-care, accessing cultural consultation and awareness of the effects of trauma, all assist with coping in this work environment.

A TCM-derived QOL to assess PROs linked with biomarkers as evidence-based measures in TCM practice

By Kelvin Chan; Li Zhao; Shiuhon Chui; Kwokfai Leung

Background and aims: The development of a health-related quality of life (QOL) instrument, ChQOL, based on diagnosis and treatment principles of traditional Chinese medicine (TCM) has allowed us to record patient-reported outcomes (PROs) after intervention of TCM treatment or receiving TCM prescriptions containing mixtures of Chinese materia medica (CMMs) or proprietary Chinese medicines (PCMs).¹ **Methods:** Recording objective and subjective outcome indicators such as biomarkers, ChQOL, PROs and TCM practitioners' treatment records, respectively can also provide evidence-based approaches for assessing TCM treatment efficacy on individual patients.² **Results:** The ChQOL instrument has been utilised to study patients with congestive heart failure³ and RCT panel studies of PCMs containing multiple CMMs in healthy subjects⁴, in patient suffering from hepatitis⁵, in metabolic syndrome⁶ and

rhinitis.⁷ Such integrative approaches for assessing treatment outcomes by utilising pathological biomarker data used in orthodox medicine and TCM recording methodology provide improved evidence level of efficacy in individualised TCM treatments. **Commentary:** The data collected will be improved and ascertained by applying innovative analysis with modern informatics processing technologies and provide reliable data for future data-mining. These new approaches will be more suitable for case study and may pave the way for ascertaining TCM holistic approaches to diagnosis and treatment of diseases and individualised treatment for patients. The lecture will illustrate the principles behind the use of ChQOL for PROs linking with biomarkers using available pathological tests.

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Pain in Australia: Working to Make Pain a National Health Priority

ABSTRACT: Pain is one of the biggest health issues today – every bit as big as cancer, AIDS and coronary heart disease. Yet it remains one of the most neglected and poorly understood areas of healthcare.

One in five Australians, including children and adolescents, will suffer chronic pain in their lifetime. This prevalence rises to one in three among older Australians. Yet up to 80% of people living with chronic pain are missing out on treatment that could improve their health and quality of life.¹ The cost of chronic pain in Australia is estimated at \$34 billion per annum, making it the nation's third most costly health problem.¹

Patients face long waiting times to access interdisciplinary pain services in public hospitals – frequently more than one year – resulting in deterioration in quality of life and reduction in ability to return to work.² There is a serious shortage of qualified pain medicine specialists and the education and training available for health care professionals at all levels is extremely limited.² In this context, the National Pain Strategy provides a blueprint for change, calling for pain to be recognised as a national health care priority.

BACKGROUND: In November 2007, the MBF Foundation (now Bupa Foundation), in collaboration with the University of Sydney Pain Management Research Institute (PMRI), released its report *The High Price of Pain: The economic impact of persistent pain in Australia*, prepared by Access Economics.

The report estimated that, in 2007, 3.2 million Australians (1.4 million males and 1.7 million females) experienced chronic pain. In fact, it was revealed that one in five Australians, including children and adolescents, will suffer chronic pain in their lifetime. This prevalence rises to one in three among older Australians. Productivity losses in 2007 were estimated at \$11.7 billion, equating to 36.5 million workdays each year. The report pointed out that half of the costs to the health system of \$7 billion could be saved, by providing effective and timely treatment. (See Diagram 1)

NATIONAL PAIN SUMMIT: In a world-first, Australia brought together leading health professionals, consumer organisations, funders and not-for-profit bodies to develop the National Pain Strategy – a blueprint for health policy reform in relation to acute, chronic and cancer pain.

The National Pain Summit was held at Parliament House in Canberra in March 2010, led by the Australian and New Zealand College of Anaesthetists, the Faculty of Pain Medicine, the Australian Pain Society, and consumer group Chronic Pain Australia, in collaboration with the MBF Foundation (now Bupa Foundation) and the University of Sydney Pain Management Research Institute.

More than 200 delegates representing more than 150 bodies, including the Australian Acupuncture and Chinese Medicine Association Ltd, set a revolutionary chain of events in motion, beginning with the world's first National Pain Strategy. The first draft of the National Pain Strategy had been developed by a series of Working Groups, and further developed by a series of Reference Groups representing all primary healthcare disciplines, pain specialists, other relevant medical specialists and consumers. The subsequent draft, aligned with the recommendations of the Federal Government's health reform agenda and the Prescription Opioid Policy (published by the Royal Australasian College of Physicians in April 2009), was released for public and stakeholder consultation in October 2009 and revised prior to the National Pain Summit.

In the words of Professor Michael Cousins AM, Chair of the National Pain Summit: 'In more than 46 years in health care, I have known no other health initiative [National Pain Summit] to harness such a breadth and depth of experience on a single health problem.'

NATIONAL PAIN STRATEGY: The National Pain Strategy is Australia's blueprint for health policy reform in relation to the burden of pain, and the first of its kind in the world. Subsequent to its release, Australia was invited to lead an International Pain Summit in Montreal in September 2010.

The National Pain Strategy provides recommendations for a national framework for the best practice assessment, treatment and management of acute, chronic and cancer pain, and allows for a coordinated approach to health policy reform. A key goal of the National Pain Strategy is for pain, the nation's third most costly health problem, to be recognised as a national health priority, ensuring appropriate funding for essential services.

As a result of the National Pain Strategy, States have begun to implement health policy reform, led by Queensland and Western Australia, followed by Victoria, and with New South Wales preparing to launch its Pain Management Plan in 2012.

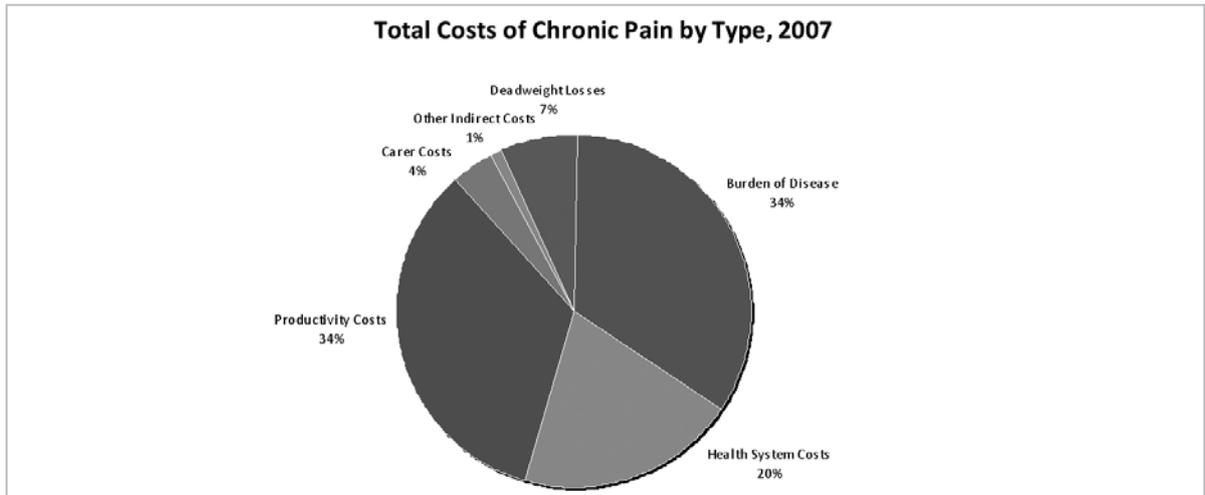


FIGURE 1 The High Price of Pain: The economic impact of persistent pain in Australia. November 2007. Prepared by Access Economics for MBF Foundation (now Bupa Australia Foundation) in collaboration with University of Sydney Pain Management Research Institute.

INTERDISCIPLINARY APPROACH: The National Pain Strategy recommends an interdisciplinary approach to the assessment and treatment of pain, as part of a three-tier model of service provision, encompassing:

- Tertiary interdisciplinary pain clinics;
- Primary care centres offering interdisciplinary assessment, treatment and referral; and
- Community support programs.³

Comprehensive primary healthcare centres could provide best-practice interdisciplinary and supportive care for people with chronic pain including medical care, physical therapies, psychology, group education programs and medicines counselling. Within this, there is scope for complementary therapies, such as acupuncture, to comprise an important part of holistic treatment plans.

To underpin improved coordination of care, the National Pain Strategy supports the development of systems, including e-Health records, to facilitate adequate communication between consumers and health professionals, between treating health professionals, and on transition from one care setting to another. Tele-Health systems that extend care into regional Australia are also critical.

PAINAUSTRALIA: Formed in February 2011, Painaustralia is the body established to facilitate implementation of the National Pain Strategy. A national network of healthcare, consumer and related organisations, Painaustralia's primary role is in advocacy and facilitation. Working with member bodies, and with links to government and the media, Painaustralia is focused on highlighting the issue of pain in the Australian community, in order to destigmatise pain, improve pain services, and minimise the burden of pain on individuals and the community. With the prevalence of chronic pain projected to increase to 5 million Australians in 20501, largely the result of an ageing population, Australia urgently needs health policy reform.

GLOBAL AWARENESS: Not just an issue for Australia, the global community is now focusing its attention on pain. At the International Pain Summit in Montreal in September 2010, attended by delegates from more than 120 countries, two important manifestos were produced:

- A statement of Desirable Characteristics of National Pain Strategies, which drew extensively upon the Australian National Pain Strategy; and
- The Declaration of Montreal, which calls for access to pain management as a fundamental human right.⁴

This has been endorsed by the International Federation of Health and Human Rights Organisations and the US Institute of Medicine of the National Academies.

More recently, the World Medication Association, at its General Assembly in Montevideo in October 2011, adopted a resolution that: 'Denial of pain treatment violates the right to health and may be medically unethical ... Each government should provide the necessary resources for the development and implementation of a national pain treatment plan, including a responsive monitoring mechanism and process for receiving complaints when pain is inadequately treated'.⁵

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Australasian Integrative Medicine Association

The Australasian Integrative Medicine Association (AIMA) is an independent not-for-profit organisation of individual healthcare practitioners seeking to provide whole person medical care by integrating evidence-based complementary medicine into mainstream practice. AIMA is supported by its membership and governed by a Board of voluntary doctors and academic leaders in the field of Integrative Medicine.

Since its inception in 1992, AIMA has grown to be the leading voice for integrative practitioners. AIMA's membership and successful events, including the International Holistic Health Conference, have helped promote the growing body of research and provide education about complementary medicines and therapies.

AIMA has forged relationships with key organisations such as the The Royal Australian College of General Practitioners (RACGP) – through the AIMA/RACGP Joint Working Party and Therapeutic Goods Administration (TGA) as well as other professional bodies with an interest in integrative therapies. AIMA works collaboratively with associations such as the Australian College of Nutritional and Environmental Medicine (ACNEM) and the MINDD Foundation in a spirit of mutual support. AIMA continues to have meetings with the TGA and Health Ministers to progress the evolution of Integrative Medicine at an academic, industry and political level.

AIMA wishes to further expand its affiliations amongst like-minded associations such as the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA) in order to improve communications and networking in the current integrative medical environment.

AIMA continues to focus on:

- Enhancing the profile of Integrative Medicine within the modern medical framework

- Lobbying for the continuation of complementary medicine education at a tertiary level
- Organising a collaboration of academic centres to forward research developments within complementary/integrative medicine
- Monitoring the currently proposed TGA regulatory changes in regard to complementary medicines
- Progressing the development of professional regulation within complementary medicine modalities in a manner that respects the current pragmatic realities of the complementary medicines industry
- Lobbying for an acceptance of complementary medicines approaches within Public (Medicare) and Private Health Insurance framework
- Developing practical approaches to multidisciplinary networking with medicine
- Increasing the public's awareness of the genuine value of complementary medicines when integrated with mainstream care.

Finally, AIMA seeks to ensure both practitioners and consumers have access to the best available knowledge about the benefits and risks of these complementary medicines so that optimal patient care and good health can be achieved and maintained.

AIMA provides its members with a quarterly journal, including the soon-to-be-launched international evidence-based peer-reviewed journal, *Advances in Integrative Medicine*, in association with Elsevier.

AIMA would therefore like to extend a warm welcome towards all those involved with complementary/integrative therapies and hope they will attend 'Bridging the Gap', our annual conference on August – September 2012 in Melbourne. We believe 'Bridging the Gap' will be a vital conference in extending the networking necessary for developing and progressing Integrative Medicine into the future.

National Institute of Complementary Medicine: an Update

\$2.9 million committed to complementary medicine research sector

National Institute of Complementary Medicine (NICM) was established at the University of Western Sydney in 2007 after a decade of agitation by researchers and industry to have a coordinating, oversight agency that could contribute to policy development, national research priorities, clinical guidelines development and many other aspects that were desperately needed in the field. NICM was seeded with two years of funding in a joint, bipartisan support from the Commonwealth and NSW Governments.

During its first three years of operation NICM established three Collaborative Centres with additional industry funding, demonstrated the cost effectiveness of a range of complementary medicine interventions in collaboration with Access Economics, funded several integrative healthcare pilot studies (two with the National Breast Cancer Foundation) and galvanised a \$75 million strong Cooperative Research Centre bid. The Institute has provided the vital link between researchers, practitioners, industry and government.

The Collaborative Centres have supported the professional development of 13 PhD students and 21 postdoctoral fellows and research associates. NICM has made significant progress in advancing a collaborative approach to complementary medicine research aligned with national health priorities. It has also established a reputation as an independent, authoritative voice for the complementary medicine sector.

In a major boost to the complementary medicine research sector the NICM has received \$2.9 million in funding from philanthropic and industry supporters.

This funding will ensure NICM can continue to drive the complementary medicine research sector in Australia and provide a vital link between researchers, practitioners, industry and government.

The major part of the funding has been received from the privately owned Jacka Foundation of Natural Therapies (JFNT). Their \$2 million bequest will be used to establish The Jacka Foundation Chair in Complementary Medicine in partnership with the University of Western Sydney (UWS). UWS has committed to endowing the Professorial Chair to support research undertaken by NICM. The Chair will oversee NICM operations and provide clear, expert support for research development and integration of evidence-based complementary medicine into healthcare services.

Leading companies Flordis, Blackmores and Catalent will become supporting partners of NICM, each committing additional financial support.

According to NICM's interim executive director Professor Alan Bensoussan, the landmark donation from JFNT combined with industry and university support will secure NICM as a strong, national agency for Australia.

'Our primary goal will still be to increase the integration of well-evidenced complementary medicine into routine healthcare by enabling translation of evidence into clinical practice and relevant policy to benefit the health of all Australians,' Professor Bensoussan said.

Over the next three years (2012–14) NICM will focus on sector reform, including creating better incentives to invest in research and improved integration of evidence-based interventions into mainstream practice. The Institute will continue to refine national research priorities, contribute to the development of clinical practice guidelines and work alongside government, consumers, industry and other stakeholders to strengthen relevant policy.

UPCOMING INTERNATIONAL CONFERENCES

2012

- 22–24 June Wellington, New Zealand
New Zealand Register of Acupuncturists AGM and Conference
Visit www.acupuncture.org.nz
- 31 Aug–2 Sept Melbourne, Australia
Bridging the Gap - 18th International Integrative Medicine Conference (AIMA)
Visit www.aima.net.au
- 14–16 September Seoul, Korea
16th International Congress of Oriental Medicine
Visit www.icom2012.org
- 28–30 September Old Windsor, Berkshire, United Kingdom
British Conference of Acupuncture and Oriental Medicine (British Acupuncture Council)
Visit www.acupuncture.org.uk
- 5–7 October Sydney, Australia
iSAMS Moving Acupuncture Research Forward-Issues and Solutions
Visit www.isams.org/2012/
- 2–5 November Aurangabad, India
7th International Conference of Medical & Cosmetic Acupuncture
Visit www.acupunctureindia.org
- 10–11 November Kuching, Sarawak, Malaysia
WFCMS 9th World Congress of Chinese Medicine
Visit www.2012wccm.com
- 16–18 November Bandung, Indonesia
WFAS International Congress and Workshop on Acupuncture 2012
Visit: www.wfas2012-indonesia.com
- 7–9 December New Delhi, India
15th World Conference of Acupuncture Association of India
Contact email: kapuracu@airtelmail.in

2013

- 7–12 May Rothenburg, Germany
44th TCM Kongress Rothenburg 2013
Visit www.tcm-kongress.de
- 2–4 November Sydney, Australia
WFAS 8th World Conference on Acupuncture
(World Federation of Acupuncture-Moxibustion Societies)
Visit www.wfas2013sydney.com