

A summary of research into Chinese herbal medicine during 2009

This report summarises the positive evidence supporting Chinese herbal medicine (CHM) that occurred during 2009. It is not intended as a full systematic review of all published literature. It does not include systematic reviews that were inconclusive. It also excludes several hundred randomised controlled trials (RCT's) reported in journals of Chinese medicine. Instead I have focussed on systematic reviews published in the Cochrane library and other peer reviewed English language journals. These provide more robust evidence than can be obtained from most individual clinical trials. One exception to this is an interesting and methodologically rigorous RCT comparing CHM and a conventional drug in the treatment of rheumatoid arthritis that is published in a prestigious English language journal. Finally I have provided details of the innovative CHM Database Project and of 2 post-graduate awards made in the UK during 2009 for CHM related clinical research.

The research that occurred in 2009 does not provide conclusive evidence of the effectiveness of CHM. However it does provide preliminary evidence for the potential therapeutic benefit of CHM in the treatment of a wide range of medical conditions. Additional more rigorous research is required to verify these findings but, despite these limitations, 2009 was a year when important contributions were made to help establish an evidence base to support the developing role of CHM in the provision of healthcare in the UK.

1. Cochrane reviews

Cochrane reviews require the use of explicit and transparent methods, are peer-reviewed at both the protocol and complete review stage, and are regularly updated. For these reasons, they have been found to be of comparable or better quality than reviews published in even the leading print journals

Manheimer et al (2009) systematically reviewed all Cochrane reviews relating to Chinese medicine. In total, at the time of writing, there were 42 reviews. 56% of these reviews provided evidence that CHM could have a useful therapeutic role in the management of the following medical conditions:

- *atopic eczema*
- *primary dysmenorrhea*
- *schizophrenia*
- *nephritic syndrome*
- *angina*
- *type II diabetes mellitus*

- *severe acute respiratory syndrome (SARS)*
- *acute pancreatitis*
- *hepatitis B*
- *common cold*
- *side effects of chemotherapy in breast cancer*
- *irritable bowel syndrome*
- *viral myocarditis*
- *Alzheimer's disease*
- *ischemic stroke*
- *heart failure.*

The evidence within these Cochrane reviews is not conclusive. The numbers involved were frequently too small, the methodological quality of the trials was generally poor, and the studies were highly heterogeneous. However these reviews do provide preliminary evidence supporting the use of CHM in the treatment of these conditions. Further more rigorous research is required to verify these findings.

In addition to Manheimer's review there were two other Cochrane reviews published in 2009.

- CHM for endometriosis (Flower et al 2009) reviewed 110 clinical trials using CHM to treat this common and disabling gynaecological condition. Only 2 studies involving 158 women could be included and these trials indicated that post surgical administration of CHM may have comparable benefit to the conventional treatment of endometriosis but with fewer side effects.
- CHM for people with impaired glucose tolerance or impaired fasting blood sugar (Grant et al 2009) examined 16 trials involving 1391 participants and provided some evidence to support the role of CHM in normalising blood sugar levels and preventing the progression to diabetes over time. As with most Cochrane reviews more and better quality trials are required to substantiate these early findings.

2. (Non Cochrane) Systematic reviews

In addition to the above Cochrane reviews there were a further 7 systematic reviews produced in 2009 and published in peer reviewed English language journals.

- *CHM as concomitant therapy for nasopharyngeal carcinoma (Cho & Chen 2009)*

A systematic review and meta-analysis of 18 RCT's involving 1732 participants that combined conventional care and CHM provided preliminary data that the response to conventional treatment improved (6 studies) and quality of life improved with CHM (2 studies), adverse events from conventional treatment were reduced (5 studies) and that CHM induced an enhanced immune response (3 studies).

- *CHM for mild cognitive impairment and age related memory loss (May et al 2009)*

10 RCT's were evaluated. In 8 out of 10 trials CHM showed some benefit for memory loss and cognitive impairment. A meta-analysis of 3 trials showed equivalent benefits to the conventional medical treatment 'piracetam' and no adverse effects reported. CHM may have a role to play in treating these increasingly common conditions.

- *CHM in paediatric allergic disorders (Li 2009)*

A review of recent studies indicated that TCM therapy, including herbal medicine and acupuncture, in children is well tolerated. There were promising clinical and objective physiological improvements. More controlled studies are needed to substantiate these findings.

- *CHM for symptom management and improvement in quality of life in adult cancer patients (Molassiotis 2009).*

49 trials that included 3992 participants were reviewed to assess the role of CHM in reducing chemotherapy related toxicities and in improving quality of life. The review showed that CHM reduced side effects, improved quality of life and performance status, and in some cases showed enhanced tumour regression and increased survival rates. Once again the methodological quality of the included trials were poor and more rigorous trials are required to investigate the possible role of CHM in cancer care.

- *A meta-analysis of CHM in the treatment of managed withdrawal from heroin (Liu 2009).*

21 studies involving 2,949 participants were included in this systematic review and meta-analysis. Measurement of withdrawal symptoms over a 10 period showed that conventional treatments (opioid agonists and alpha2-adrenergic agonists) were superior to CHM in the first 3 days but CHM was equivalent to or superior than conventional treatment from Days 4-10. Adverse effects were lower in the CHM treatment groups. This analysis suggests CHM may have an important role in helping to manage heroin withdrawal.

- *A systematic review of oral CHM as supportive treatment during chemotherapy for non small cell lung cancer (NSCLC) (Chen 2009).*

15 trials involving 862 participants comparing chemotherapy alone with chemotherapy plus CHM were included in this review. In participants with advanced cancer (stages III and IV) CHM was shown to help improve quality of life (QoL), reduce anaemia and maintain immune function by helping to prevent destruction of white blood cells (neutropenia). It is possible that oral CHM used in conjunction with chemotherapy may improve QoL in NSCLC. This needs to be examined further with more rigorous methodology.

- *A meta-analysis of RCT's using CHM formula 'modified xiao yao san' (MXYS) for functional dyspepsia (indigestion and heartburn) (Qin 2009).*

14 trials were included in this systematic review and meta-analysis. CHM (MXYS) alone was better at reducing the symptoms of dyspepsia than conventional treatment (prokinetic drugs eg domperidone) with no serious adverse effects reported. A combination of CHM (MXYS) and conventional treatment was most effective at reducing symptoms. These are preliminary findings which are limited by methodological weakness and possible publication bias so, once again, more rigorous studies are required.

3. Individual randomized controlled trials

- *A RCT comparing Tripterygium wilfordii (TW) versus Sulfasalazine in the treatment of Rheumatoid Arthritis (RA) (Goldblach-Mansky et al 2009).*

121 patients with active RA were randomized to treatment with either the Chinese herb TW or the anti-inflammatory drug sulfasalazine. Assessment after 24 weeks of treatment showed that more people improved with the Chinese herb than with the sulfasalazine. Side effects occurred with similar frequency in both groups. This was a small trial with a high drop out rate but it suggests that TW may offer an alternative treatment for patients with active rheumatoid arthritis.

4. Other research developments

- *The Chinese Database project*

2009 saw the inauguration of the CHM database project resulting from the collaboration of the Register of Chinese Herbal Medicine, the Southampton Complementary Medicine Trust, and the Beijing Traditional Chinese Medicine Cochrane Centre. The aim of this project is to improve access to the estimated 17,000 (Tang et al 1999 & Wang et al 2007) randomized controlled trials currently stored on the Chinese database and to systematically identify high quality trials that will be translated into English and reviewed. This will allow practitioners outside of China to benefit from the expertise of Chinese specialists and will identify potentially fruitful areas for future research. In 2009 5 common conditions were selected for review:

- Polycystic ovarian syndrome (PCOS)
- Multiple Sclerosis
- Graves Disease (hyperthyroidism)
- Eczema
- Irritable bowel syndrome

Results from these reviews will be available in 2010.

- *Postgraduate research qualifications*

Two post graduate qualifications for original clinical research into CHM were awarded by UK Universities in 2009. Dr. Trevor Wing was awarded a Professional Doctorate in Medicine by the University of Portsmouth after his thesis:

INVESTIGATION OF THE REPRODUCTIVE EFFECTS OF CHINESE HERBAL MEDICINE IN HUMANS AS MEASURED BY 3D ULTRASOUND AND BLOOD SERUM.

Andrew Flower was awarded a PhD by the University of Southampton for his thesis:

THE ROLE OF CHINESE HERBAL MEDICINE IN THE TREATMENT OF ENDOMETRIOSIS.

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