

Raw Herbs Vs Powders: Are we diluting our medicine?

Conny Duxbury

Arduina Resta

University of Westminster MSc Chinese Herbal medicine 2014/15



1. Introduction

A 2012 survey of RCHM and ATCM members revealed some interesting statistics: of 134 respondents, 59% believed raw herbs to be the most effective form of administration of CHM, yet only 22% used them as their main form of administration. Almost half of them (49%) used concentrated powders as their main form of administration. (Chick, 2012)

This raises many questions:

As a profession, are we knowingly reducing the efficacy of our treatments for patients? Are we therefore having a detrimental effect on how we are perceived by the general public? Are we losing touch with our origins? In short, are we “diluting” our medicine?

AIMS of this poster:

- *To put the issue of raw herbs vs powders in the context of CHM's history
- *To provide evidence both for and against the use of raw herbs and powders
- *To give practitioners enough information to allow them to make an informed decision as to their chosen mode(s) of administration.

2. Historical Perspective

Raw herbs and powders both have a long history in Chinese Medicine:

Both raw herbs and raw herb powders are mentioned in the *Huang Di Nei Jing*, and are referred to in the contents of the *Mawangdui tomb* (200 BC). (Plant, 2012). Thus both were present at the beginnings of CHM.

In the *Shang Han Lun* (20-200 A.D.), decoctions were the predominant form of therapy though other forms were mentioned, including powders and pills (Dharmananda, 1997).

Decocted powder preparations were widely used *between the Tang and the Song dynasty* (906 - 960 A.D.), as China was in chaos due to war and conflict. This was a way of saving time and quantities of herbs. (He, 2013)

In the *Song dynasty* (960 - 1272 A.D.), a time of epidemics, the first state-run imperial pharmacy was set up. Prepared formulas in powder and pill forms were made available to the public on a large scale. Processing techniques improved and availability of processed herbs increased (Plant, 2012). This was the first peak of use of powders.

The second peak is the *1950s to the present day*. The concentrated powders we use were first developed in Japan at a time of major industrialization and spread from there (Dharmananda, 1997).

Traditionally, different methods of administration had different therapeutic actions:

Unschuld (1998) translates a book by a traditional doctor of the 1600s: The chapter “On the inadequacy of Decoctions to Completely Cure Illnesses” contains the following quote:

“Applying nothing but decoctions is inadequate to completely cure illnesses. The correct mode of administration must be taken into account *according to the location of the illness.*”

According to this book, physicians must prepare pills, powders, and pastes in advance of a situation when they are confronted with an illness requiring their urgent application.

We also have records from a case study from a Song Dynasty physician, whereby the patient doesn't get better because he took a Xiao Chai Hu formula in powder, and not a decoction: “A decoction enters the tracts and quickly attacks the disorder. *The present medication is a powder. It stagnates above the diaphragm. Therefore it gives a feeling a fullness and the disease is unaffected.*”. Goldschmidt (2009):

However, not all traditional doctors agreed that the increase of use of powders in the Song dynasty was a good thing.

Dharmananda (2014) mentions a Song dynasty physician lamenting that the use of decoctions was declining: “*when there is a situation where the use of decoctions is indicated, doctors usually prescribe boiling powders.*”

Conclusions:

Raw herbs and powders are both legitimate methods of administration within Chinese Medicine.

However, they are not equal, and must be prescribed in the correct circumstances - be that for medical purposes, or for practical ones.

History repeats itself! Already in the Song dynasty, there was some controversy over whether powders were being overused.

3. Modern Research

Production of powders

There are 2 types of powders:

*Raw powdered herbs are herbs that have been ground directly. They still need to be decocted, but for a shorter time.

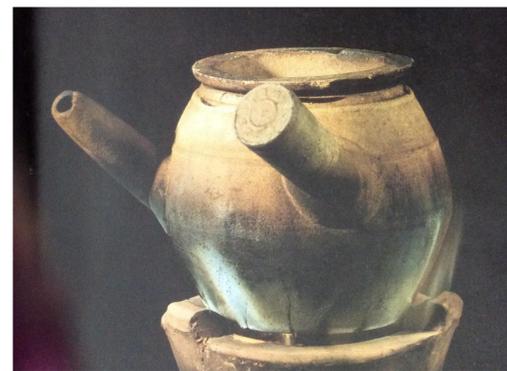
*Powdered extracts are made from decocted herbs. They are ready to be ingested. They are usually extracted in water, which is what Chinese medicine is based on. Some extracts can be done with other solvents, eg alcohol, but this changes the nature of the decoction as different active ingredients may be extracted. (Sturgeon, 2012)

The industry standard yield ratio is 5:1, ie the amount of product yielded from the extraction process. A higher/lower yield does not mean a stronger/weaker powder, simply that more or less raw herb was necessary to obtain the amount of powder. (Sturgeon, 2012)

Efficacy of powders vs raw herbs:

There is very little scientifically rigorous research available in the West on this issue. Efficacy can be assessed through clinical trials or through the analysis of active ingredients.

Clinical Trials: A systematic review of 56 RCTs conducted in China reported no statistical significance between the effectiveness of powders and decoctions. However poor methodological quality and a high risk of bias for most trials means that further research is needed. (Luo et al, 2012)



Individual active ingredients: Clarke, (2010) studied the levels of active ingredients of Guan Ye Lian Qiao in 3 forms: raw, powdered and tincture (from the same batch). The level of hyperforin (thought to be the main therapeutic compound) in the powder was negligible. The author concludes that many compounds that are bioactive and thought to be responsible for therapeutic effects of herbs are unstable and are likely to be lost in the process of creating powdered herbs.

Synergy of active ingredients: When herbs are decocted together, many chemical reactions occur between their active ingredients. For example, decocting Chi Shao Yao and Chuan Xiong together creates different relative amounts of active ingredients compared to decocting them separately (Li et al, 2006). Sometimes the chemical reactions of decocting herbs together creates new compounds altogether that were not present in the initial herbs (Yan, 2001). There is therefore a *clear synergistic effect* when decocting herbs.

However, Yang et al (2009) state that when mixing two powdered herb extracts from commonly used herb pairs together, their antioxidant effect was stronger than the effect of the single powdered herbs added together. Thus mixing powdered herbs also creates a *synergistic effect*.