

Integrative Chinese Medicine

A New System for Diagnosis and Treatment

Safety in Herbal Medicine: Traditional Sources and Modern Research

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Safety in Herbal Medicine: Contents

1. Introduction

- a. The Context
- b. Lobelia as an Example
- c. Before Prescribing + Monitoring

2. Safety in Herbal Medicine: Tradition

3. Safety in Herbal medicine: Research

Safety in Herbal Medicine Part 1

Introduction

Part 1.a
Introduction
The Context

The Context: Lifestyle and Medication

Lifestyle

The safe use of herbal medicine must be looked at in the context of lifestyle, which has its own hazards, eg:

- unwise and inadequate nutrition for up to 30% of the population
- recreational drugs
- mental-emotional disturbance or depression
- chronic exhaustion and reduced immunity

Medication

And the safety of herbal medicine must also be looked at in the context of conventional medication.

Long-term multi-medication is well-known for the elderly, but is now common for many children and younger adults, and has risks:

- drug side-effects, and drug interactions, are a main source of illness
- repeated antibiotic prescriptions can result in:
 - dysbiosis, reduced immune strength, and recurring infections
 - creation of multi-drug-resistant bacteria

The Context: Lifestyle and Medication

Herb safety

Before prescribing a single herb or herb combination, the practitioner should consider:

- **lifestyle:** is the herb prescription safe in the context of the patient's lifestyle?
- **medications:** is there a possibility of herb-drug interaction with any of the patient's conventional medications?
- **disorders:** might the herbs aggravate any of the patient's disorders, eg. headache, or life conditions, eg. pregnancy?

- **Chinese syndromes:** is the herb prescription likely to aggravate any of the patient's existing Chinese syndromes, eg. Heart Spirit Disturbance?
- **dose and dispensing:** are the herb dose and the dispensing method used safe for this patient?

Herb safety data

This is given for each herb in the database: see the example of [Lobelia](#) on the next slide.

Part 1.b
Introduction
Lobelia as an Example

Lobelia as an example

Local regulations

Practitioners should check the regulations governing the use of Lobelia in their country or state.

UK: currently, under the 1977 rules, the maximum permitted doses of Lobelia are as follows:

Dried herb 0.2 g dried herb, as a powder or decoction, 3 times per day (total of 0.6 g per day).

Tincture 2 ml of 1:10 tincture in 60% alcohol, 3 times per day (total of 6 ml per day).

But if tincture is 1:5, then doses should be halved.

Children: Lobelia is best used in combination with moderating herbs, such as Zingiber.

I use the following doses of 1:10 Lobelia tincture, three times per day:

Lobelia Child Dosage and Age	
Age	Dose in drops
infants (6-12 months)	1
toddlers (1-2 years)	1-2
children (2-5 years)	2-6
children (6-10 years)	6-12
teens (11-18 years)	12-30

Lobelia as an example, cont.

Mode of dispensing Lobelia can be dispensed as an infusion, but I generally prescribe it as a tincture or as a decoction.

Initial dose Should start with a low dose and gradually increase the dose to the maximum therapeutic level tolerated by the patient or to the maximum level allowed in the given country or state.

Duration Providing there are no side effects, Lobelia can be taken long-term, but see *General contraindications* and *Side effects*.

General cautions and contraindications

Nausea

- doses of Lobelia *below* normal therapeutic level may reduce nausea
- caution with higher doses of Lobelia for patients with a tendency to nausea and vomiting
- nausea may be avoided or reduced if Lobelia is given together with a little Zingiber, and if lower doses are used. Stop Lobelia if nausea persists

Exhaustion

For weak patients, Lobelia should only be used in low doses and combined with a circulatory stimulant, such as Capsicum or Zingiber.

Lobelia as an example, cont.

Chinese medicine

- contraindicated for edema due to Deficiency
- the relevance of this statement to Western therapeutic doses of *L. inflata* is doubtful, since the dose listed in Bensky for *L. chinensis* is equivalent to ca. 1-5 g per day of *L. chinensis*, as opposed to the UK maximum dose of 0.6 g for *L. inflata*

Pregnancy and lactation

- best avoided
- except for short-term use, by practitioners experienced with the use of Lobelia and with the treatment of obstetric conditions, to assist labor or for post-partum pain

Lobelia as an example, cont.

Side effects Transient prickling or tight sensation in the throat, coughing, nausea, or even vomiting in susceptible individuals. Some individuals may have nausea even at low doses of Lobelia (JR).

Overdose Vomiting, profuse perspiration, hypothermia, and hypotension: but see discussion in PPMM.

- referring to the use of therapeutic doses of preparations of Lobelia herb, the editors of the *Botanical Safety Handbook* found no substantiated evidence of severe symptoms or death produced by *Lobelia inflata*

Drug interactions No reports of adverse effects known (JR).

Monitoring During the course of an internal treatment, which includes Lobelia, the patient should be monitored for (increased) nausea, vomiting, headache, dizziness, and other side effects.

Management of adverse reactions

Mild to moderate adverse reactions

Reduce the dose or stop the administration of Lobelia if an adverse reaction develops during treatment; if the reaction disappears, it may be possible to raise the dose gradually to its previous level.

Severe adverse reactions Stop taking the Lobelia preparation and seek medical advice and assistance immediately.

Part 1.c
Introduction
Before Prescribing + Monitoring

Before Prescribing

Before prescribing

The following should be done before herb prescribing:

- individual consultation by licensed practitioner
- accurate diagnosis
- conventional diagnosis and treatment when necessary, eg. heart disease
- check local laws on prescribing specific herbs
- check appropriate dose for age and situation
- check cautions for each herb
- check for updates in information, eg. online

Modifications

- if practitioner modifies one of the pre-set herb combinations, then they must check that their new combination is safe for the patient

Monitoring

Monitoring

- this means watching for herb side-effects, and can be done by both practitioner and patient
- it is especially important for powerful herbs, eg. Cinchona, Convallaria, Ephedra, Lobelia, and Sarothamnus

Practitioner

- informing the patient of specific potential side effects, and also how to minimize them
- good communication essential that practitioner makes clear to patient the importance of informing them of any side effects by phone or email

Patient

Patient can be asked to keep a record of the following:

- any suspected side effects or adverse herb-drug interactions: noting such details as severity and the time and date the symptoms occurred
- any changes in prescribed or self-prescribed conventional medication, herbs, food supplements, or life stresses that may have been responsible for the symptoms

Safety in Herbal Medicine Part 2

Tradition

Herbal Safety: Temperature

Traditional Safety Balancing

In both Western and Chinese herbal traditions, there have been 4 main factors used to create a safe balance for a herb combination:

- temperature
- direction of energy
- tastes
- herb actions

Temperature

- practitioner grades patient according to one of the 5 grades shown in the Table
- then chooses a herb or combination that will bring patient's temperature back to approximately normal

TEMPERATURE BALANCING	
Patient	Herb/combo
Hot	Cold
Warm	Cool
Neutral	Neutral
Cool	Warm
Cold	Hot

But!

It is easy to make mistakes!

Eg. practitioner must always ask “What was your temperature **before** the fever, menopause, or whatever?”

Eg. what if the patient was cold before the menopause, and practitioner gives them lots of cooling herbs???

Herbal Safety: Direction of Energy

4 main directions

We can say there are 4 main directions of energy movement in the body:

- up
- down
- out
- in

Health movement occurs in all four directions in a balanced rhythm.

Pathology imbalance of one or more of the 4 directions of energy movement, resulting in Chinese syndromes and symptoms.

Direction of Energy Sickness	
Up	+ ↑
Down	+ ↓
Out	+ ←→
In	+ →←

Examples

- LR Yang Hyperactive, LR Wind, and HT Spirit Disturbance are pathological energy going up, and need to be brought down
- Spleen Damp will bring energy down and the person feels heavy and dull: Damp needs to be cleared and the energy brought up

Herbal Safety: Tastes

Taste balancing

The concept of taste properties is a sophisticated system for balancing herb combinations so that they are maximally effective and safe.

Simplified system

ICM concentrates on 5 main taste properties:

- bitter
- sour-astringent
- sweet
- acrid
- aromatic

Problem

- a patient is chronically exhausted, malnourished, and anemic
- but she has digestive difficulty, and is prone to feeling heavy, especially when the weather is damp
- she needs nourishing moist **sweet** tonics eg. Avena, Lycium, and molasses; but these can cause digestive stagnation and increase Damp

Solution

- add warm **aromatic, acrid** herbs to combo, eg. Acorus and Citrus, to reduce stagnating effect of moist **sweet** tonics, and to transform Damp

Action balancing

Actions should be balanced in a herb combination so that it is maximally effective and safe.

Rheum 2 as example

Rheum 2 is for chronic constipation and is based on *Christopher's Lower Bowel Tonic*.

Purgatives

- leading herbs are **Rheum** and **Rhamnus**, which are purgatives
- but these herbs may cause intestinal spasm

Spasmolytics

- so, a smaller amount of spasmolytics, **Lobelia** and **Foeniculum**, are included to reduce excessive intestinal spasms

Safety in Herbal Medicine Part 3

Research

Research based Combinations

Recent research

Especially in the last 50 years, there has been an explosion in the number of research articles on the pharmacological actions of herb extracts and herb constituents, eg:

- antiviral, antibacterial, immunomodulatory, anti-inflammatory, anticancer, spasmolytic, anxiolytic, antidepressant, etc.

Research-based combinations (RBCs)

- this research has enabled the creation of RBCs by practitioners
- herbs are included in the combination because the herb or its constituents were reported to have the pharmacological actions necessary to treat patient's disorder

Type and Quality of research

Type

- includes in vitro, in vivo, human case reports, and- the gold standard- randomised clinical trials

Quality

- whatever the type of the research study, the quality can be good or bad, depending on what mistakes were made by the researchers

Assessment

- detailed assessment of the quality of research studies is a specialized skill, which few practitioners possess
- one option is to read published review articles on a specific topic, eg. Cochrane Reviews, which can be found online

Isatis 1 as Example

Isatis 1 Acute infection <i>Wind Heat + Epidemic Pathogen</i>						
Herb	Plant part	Strength	Ratio	Temperature	Taste	Action
Isatis (da qing ye)	leaf	1:3	0.5	cold	bitter	anti-inflammatory, antimicrobial, cool-cold
Isatis (ban lan gen)	root	1:3	0.5	cool	bitter	
Berberis	bark	1:3	1	cool	bitter	
Echinacea	root	1:3	1	cool	acrid, bitter	anti-inflammatory, antimicrobial, cool
Zingiber (dried)	rhizome	1:3	0.5	hot	acrid, aromatic	circulatory stimulant, hot

Introduction

2 main uses

Isatis 1 has two main uses:

- acute infection
- recurring low-grade fever (LGF)

Research-based combination

Isatis 1 is a research-based combination, and the herbs are chosen because they or their constituents have been reported to have one or more of the following pharmacological actions:

- antiviral, antibacterial, anti-inflammatory, immunomodulatory, antipyretic

Isatis 1 Research Table

- this Table on Slide 24 summarises the 101 research articles used to support the pharmacological actions listed
- Slides 25-29 list these 101 articles, and all you have to do, for any one of them, is open it in PubMed
<http://PubMed.ncbi.nlm.nih.gov>
and, if necessary, translate it using DeepL
<https://www.deepl.com/translator>
- this Isatis 1 research Table was made in 2021, and many more articles on these herbs have been published since then

Research based Combinations

Safety checks

If you make an RBC, based on research evidence, you still need to check that it is safe for a particular patient.

Traditional safety checks

- **temperature** Isatis 1 would be too cold for many patients, especially due to Isatis leaf, so 0.5 Ratio of dried Zingiber is included to balance this
- **direction of energy** Zingiber is included to make the combination more dispersing
- **tastes** acrid quality of Echinacea and acrid and aromatic quality of Zingiber balance the bitter taste property of Isatis and Berberis

- **actions** strong circulatory stimulant action of Zingiber balances antimicrobial and anti-inflammatory actions of the other herbs

Other safety checks

- **pregnancy** Isatis leaf and Berberis should be replaced by Scutellaria baicalensis (Huang Qin)
- **herb-drug interactions** check Cautions for Berberis, Echinacea, Zingiber
- **long-term use** contraindicated

Isatis 1 Research Table		Acute infection			
Herb	Actions				
Constituent	Antiviral	Antibacterial	Anti-inflammatory	Immuno-modulating	Antipyretic
Isatis tinctoria or I. indigotica folium					
plant extract	1,2	3,4	5,6,7,8		9
indirubin	10,11	12	13,14	15	
epigoitrin	16				
syringic acid	17	18			19
clemastanin B	20,21,22				
o-amino-benzoic acid					23
Isatis polysaccharide	24		25	26,27	
Berberis vulgaris radix					
plant extract			28		
berberine	29,30,31,32,33,34	35,36,37,38	39,40,41	42,43,44	45
berbamine			46	47,48	45
jatrorrhizine		49	50		
Echinacea angustifolia or E. purpurea radix					
plant extract	51,52,53,54	55,56	57,58	59,60,61	
alkamides	62		63	64,65,66	
polyacetylenes		67			
cichoric acid	68,69,70		71	72	
echinacoside			73,74		
polysaccharides				75,76,77	
Zingiber officinale rhizoma					
plant extract	78,79,80,81,82	83	84,85		86
essential oil			87	88,89	
gingerol		90,91,92	93,94		
shogaol			95,96		97
12-dehydrogingerdione		98	99		
β-sesquiphellandrene	100				
ar-curcumene			101		

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