

Diagnosis and Treatment of Cough

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Diagnose und Behandlung des Hustens

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The present paper briefly traces the historical development of the understanding of cough in Chinese medicine, and outlines the modern clinical perspective in the PRC. A broad distinction is made between external contraction and internal damage. External contractions are caused by wind-cold, wind-heat or dryness, while internal damage patterns are more complex, with a considerably larger number of causes: phlegm-damp brewing in the lung; phlegm heat depressed in the lung; liver fire invading the lung; lung yin depletion; lung qi vacuity, and cold rheum (*han yin* 寒飲) lying deep in the lung. These are all distinguishable in terms of presenting signs, such as the sound of the cough, the nature of any accompanying phlegm, tongue fur, and pulse, as well as by accompanying signs and history of disease. These all have quite different treatments.

Der vorliegende Vortrag beschreibt kurz die geschichtliche Entwicklung des Verständnisses des Hustens, und erläutert dessen klinische Perspektiven in der VR China. Heutzutage unterscheidet man von Außen zugezogenen Husten und durch innere Schädigung entstehenden Husten. Von Außen zugezogener Husten wird durch Wind-Hitze, Wind-Kälte oder Trockenheit verursacht. Durch innere Schädigung entstehender Husten ist etwas komplizierter und besitzt vielfache Ursachen: in der Lunge gärende Schleim-Feuchtigkeit, gedrückte Schleim-Hitze in der Lunge; Lungenangreifendes Leberfeuer; Erschöpfung des Lungen-Yin; Lungen-Qi-Leere; und in der Lunge verborgener kalter Trank (*han yin* 寒飲). Diese Krankheitserscheinungen lassen sich durch solche klinischen Zeichen wie Hustenklang, Eigenschaften begleitenden Schleims, Zungenbelag, und Puls so wie Begleiterscheinungen und Vorgeschichte der Erkrankung differenzieren. Diese verschiedenen Erkrankungserscheinungen werden unterschiedlich behandelt.

Introduction

In this presentation, I offer a theoretically oriented exposition of the diagnosis and treatment of cough. I begin with a brief outline of the history of cough in Chinese medicine.

History Chinese medicine has not, as many

people still appear to believe, remained unchanged for eons. It has been undergoing constant development. This can be seen in the realm of cough. The *Neijing* states, "The five viscera and six bowels can all cause a person to cough, not just the lung." By this statement, the authors of the

Neijing were suggesting that although cough is associated with the lung, it can reflect disease in other organs of the body. The *Neijing* also said that, "enduring cough of the five viscera can spread to the six bowels. For example, "When lung cough persists, the large intestine receives it; the sign of large intestinal cough is coughing that causes loss of stool." "When heart cough persists, the small intestine receives it; the sign of small intestinal cough is coughing that causes the letting of qi (flatus). "When spleen cough persists, the stomach receives it, and a stomach cough takes the form of cough and vomiting, and with vomiting the expulsion of long worms." These ideas, as indeed many others in the *Neijing*, attracted little interest from later physicians. However, the notion that organs other than the lung may be involved in cough has not been abandoned.

In the Sui Dynasty, Chao Yuan-Fang in his *Zhubing Yuanhoulun* proposed a tenfold classification of cough: wind cough, cold cough, propping cough, liver cough, heart cough, spleen cough, lung cough, kidney cough, gallbladder cough, and reverting yin (*jue yin*) cough. Each was defined as cough associated with some other symptom.

In the Song Dynasty (AD 960--1279), Liu Wan-Su (style He-Jian) (c. AD 1120--1200) introduced a distinction: "Ke (咳 sonorous cough) means a cough that produces sound but no matter, and arises when lung qi is damaged and loses its clarity; sou (嗽 productive cough) is a cough that produces matter without sound, and is attributed to spleen dampness stirring to form phlegm; ke sou (咳嗽 sonorous and productive cough), is one with phlegm and sound, and arises when damage to lung qi stirs dampness in the spleen, so that the ke becomes sou." From that time

on, some followed *Neijing* in treating the characters as synonymous, whereas others adopted the distinction made by Liu Wan-Su.

In the Jin-Yuan Period, Zhang Cong-Zheng pointed out that all of the six excesses (*liu yin* 六淫), that is, wind, cold, summerheat, dampness, dryness, and fire could cause cough, thus opposing the emphasis on cold placed in the *Neijing*.

In the Ming Dynasty, Zhang Jie-Bin in his *Jing-Yue Quanshu* proposed a bipartite distinction between cough due to externally contraction (*wai gan* 外感) and internal damage (*nei shang* 內傷). He said that cough due to external contraction arises because external evils enter through the skin and body hair, which are connected with the lung. If an externally contacted cough persisted, the disease could spread to five viscera (*wu zang* 五臟). As to internal damage cough, Zhang said this begins in the yin aspect. According to the notion that the lung was dry metal, and mother of water, when yin is damaged in the lower body, yang is solitary in the upper body, so that water dries up and metal is deprived of moisture. As the lung became dry, there is itching which causes an incessant cough.

In the Qing Dynasty, Ye Gui refined previous theories and experience and combined them with his own clinical understanding, and thus produce classification of cough caused by wind, cold, fire, liver fire, and kidney vacuity, etc., with appropriate treatment. This is very close to the modern understanding, which I know wish to present.

The Modern Pattern/Pathomechanism Understanding of Cough

In the modern practice of Chinese medicine there are different approaches. The notion of the pattern (*zheng* 證) is of great importance, but

different books often present a different pattern breakdown for different diseases and symptoms. In reality, a practitioner is not necessarily confronted with a typical pattern described in any book.

Central to the concept of "determining treatment in accordance with patterns identified" (*bian zheng lun zhi* 辨證論治) is the idea that there is no cure for a given disease entity or a given symptom. Rather the treatment is directed at an individual human body in a state of illness, whose precise nature is defined not only by disease-causing entities but also by the strengths and weaknesses of the patient's body.

This is a very appealing notion, especially for Westerners who are aware of the fact that the patient is often the last concern of Western medicine. From the viewpoint of the philosophy of science, it is an interesting one, because rather than narrowing the cause down as far as possible, as Western medicine does, to one isolable factor, it widens the view to numerous factors that may be only indirectly related to the patient's chief complaint.

All philosophical speculation aside, "determining treatment in accordance with patterns identified" is not without its practical problems. All patients are different and very often they have more chief complaints than just a cough, for example. For this reason, typical patterns are in practice quite rare. This, I believe, is where the difficulty lies in learning Chinese medicine. It explains the variability of diagnosis and treatment that a single patient with a same problem will get from different doctors.

The associations of the English words "pattern" or "syndrome," even to some extent the Chinese "zheng" are misleading because they suggest a constellation of signs that are addressed a medicinal

formula that represents a constellation of effects. This notion is supported by the traditional indications for varying basic formulas (for headache, add this, for diarrhea add that). Nevertheless, successful treatment lies in being able determine on the basis of symptoms what processes are occurring in the body. It is these processes that treatment addresses. Traditionally, medicinal agents and medicinal formulas are said to have certain actions, such as "clearing heat" or "harmonizing the stomach." These action or function terms describe the way in which the treatment intervenes in the pathological processes.

The ability that the practitioner has to develop is the ability to read the symptoms in order to understand the processes that are occurring. This is often difficult because any given symptom may be the result of one of several different processes. The practitioner must survey all the symptoms, and try to grasp the dynamic of the processes. He or she has to understand the significance of individual signs and combinations of signs in relationship to etiology.

When faced with a patient suffering from a complaint as simple as a cough, we will see that judging the etiological significance of signs is quite a complex matter.

Judging the etiological significance of signs is skill that cannot be gained over night. The Chinese generally consider that it takes not only clinical observation, but also wide reading to gain the clinical experience of the expert clinicians of the past. Unfortunately, although Westerners currently have access to clinical observation, they do not yet have an adequate body of literature.

Over recent years, students in China have been helped by a considerable amount of new literature that synthesizes the experience and theories of

former physicians, and presents it clearly in systematic form.

My discussion today is taken from *Zhongyi Neikexue* ("Chinese Internal Medicine"), which is one of a major series of books intended for advanced study of Chinese Medicine. This book provides quite a comprehensive, but by no means exhaustive treatment of cough.

The basic patterns that the *hongyi Neikexue* presents are these:

1. Wind-cold assailing the lung 風寒襲肺 (*feng han xi fei*)
2. Wind-heat invading the lung 風熱犯肺 (*feng re fan fei*)
3. Wind-dryness damaging the lung 風燥傷肺 (*feng zao shang fei*)
4. Phlegm-damp brewing in the lung 痰濕蘊肺 (*tan shi yun fei*)
5. Phlegm-heat depressed in the lung 痰熱鬱肺 (*tan re yu fei*)
6. Liver fire invading the lung 肝火犯肺 (*gan huo fan fei*)
7. Depletion of lung yin 肺陰虧耗 (*fei yin kui hao*)
8. Lung qi vacuity 肺氣虛 (*fei qi xu*)
9. Cold-rheum lying deep in the lung 寒飲伏肺 (*han yin fu fei*)

Other books contain other patterns, such as summerheat cough and blood stasis cough. But given the limit on time, I will limit myself to what *Neikexue* presents. I begin with the etiology of cough.

Etiology (Pathomechanisms, bing ji 病機)

In Chinese medicine, the etiology of cough is explained in terms of the counterflow ascent of lung qi caused by an evil invading the lung and

disturbing lung function. Cough is essentially associated with the lung, but the liver, spleen, and kidney may also be involved.

Lung: The lung governs qi and is charge of breathing. It is connected to the throat and opens at the nose. It is also connected with the skin and body hair. The lung is called the "florid canopy," (*hua gai* 華蓋) and its qi passes through the hundred vessels to all the viscera.

The lung has the functions of "diffusion" (*xuan san* 宣散) and "depurative downbearing" (*su jiang* 肅降). As Chinese medical terms often are, these are a little fuzzy. In simple terms, "diffusion" refers to the normal flow of lung qi that keeps the throat and nose clear. Thus cough, itchy throat, and runny nose especially when due to external evils are all considered to signs of the "lung qi failing to diffuse." Depurative downbearing refers to the downward flow of qi that keeps the lung clean and free of phlegm. Panting (or labored breathing) is considered to reflect non-downbearing of lung qi, and so is a cough that is due to internal damage. These two concepts appear to overlap to some extent.

Susceptibility to evils: The lung is light and vacuous in substance, and is susceptible to heat and cold. For this reason, it is called the "delicate viscus." The lung is easily invaded by external evils, which cause non-diffusion of lung qi. The lung reacts to this by trying to force the evil out, so that qi thrusts upward and stirs the vocal chords.

The relationship of the other viscera to the lung in respect to cough.

Liver: The liver vessel traverses the rib-side and flows into the lung. In the five phases, metal can restrain wood. When the fire of liver-wood is strong, lung-metal cannot restrain wood, so that wood

rebels against metal, and qi fire rises counterflow and invades to the lung to give rise to cough.

Spleen: In the five phases, the spleen belongs earth. Since earth engenders metal, the spleen is the mother of the lung. When the spleen's movement and transformation is weakened, phlegm arises internally. And phlegm then collects in the lung. When the lung is clogged by phlegm, its normal function is affected, and lung qi ascends to cause cough.

Kidney: The lung is said to be the governor of qi while the kidney is the root of qi. The lung governs breathing, and the kidney governs the absorption of qi. In the five phases, metal can engender water, so that the lung is the mother of the kidney. When someone has an enduring cough giving rise to lung vacuity, metal cannot engender water, and the lung disease therefore affects the kidney, giving rise to kidney vacuity. In such conditions, kidney qi moves counterflow and invades the lung giving rise to cough and panting (labored breathing).

Thus, to sum up, cough may be caused by external evils and also by various functional disruptions within the body, which involve phlegm clogging the lung.

Six excesses: When one or more of the six excess invades the lung and obstructs lung qi, the resulting condition is one of evil repletion. However, these conditions can change. For example, cough due to wind-cold that fails to dissipate, the wind-cold can transform into heat. Similarly, wind-heat can cause transform into dryness and damage liquid. Again, lung heat can heat the liquids of the body and condense them into phlegm, giving rise to phlegm-heat lying depressed in the lung.

Internal damage: When other viscera affect the

lung, the resulting condition is using one of repletion giving rise to vacuity. For example, when liver fire invades the lung, the qi fire on the one hand condenses fluids to phlegm and on the other damages the liquid of the lung.

When phlegm-damp invades the lung, it is because of a breakdown of the spleen's movement and transformation that allows dampness to collect and form into phlegm, which then gathers in the lung. If this condition persists, it can give rise to spleen-lung qi vacuity, and in severe cases this can affect the kidney, giving rise to panting.

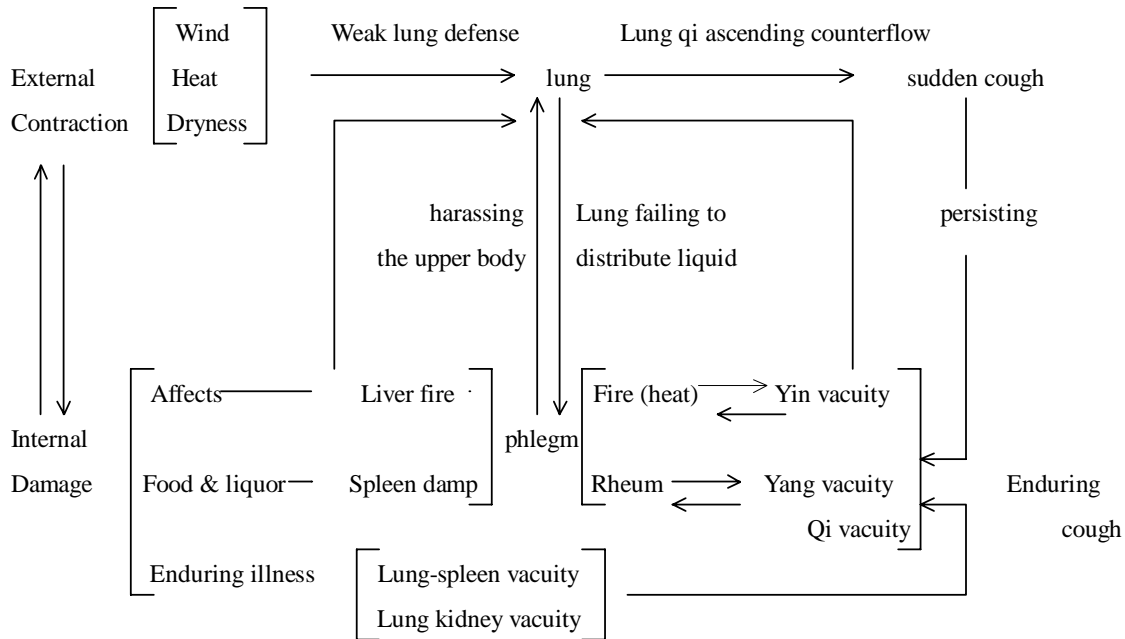
When phlegm-damp brews in the lung, can also undergo change. If the patient contracts an external evil, the phlegm-damp undergo heat transformation and become phlegm heat. When phlegm heat lies depressed in the lung for a long time, it can damage lung yin.

When cough is the result of disease of the lung itself, then the condition is usually one of vacuity complicated by repletion. For example, insufficiency of lung yin invariably leads to vacuity fire flaming upward, which scorches the liquid, turning it into phlegm. When lung qi is depleted, qi does not transform liquid, so that phlegm undergoes cold transformation and turns in rheum (*yin* 飮, a thin form of phlegm).

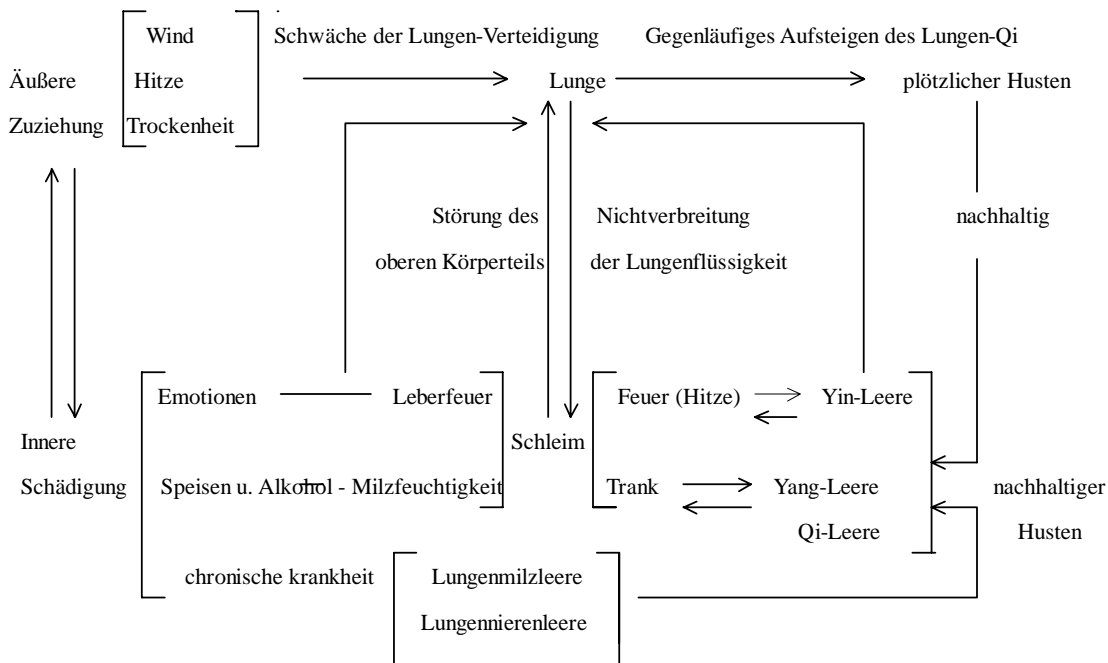
In sum, internal damage cough most takes the form of evil repletion and right vacuity. The causative agents are phlegm and fire.

Phlegm can be associated with heat or cold, and fire may be vacuity fire or repletion fire. Phlegm lying depressed in the lung can transform into fire (heat), and fire can condense the fluids into phlegm.

Pathomechanisms of Cough and Their Interrelationships



Die Pathomechanismen des Hustens und deren Wechselbeziehungen



External contraction and internal damage are mutually conducive: When a cough due to an external contraction persists and is not successfully treated, evil damages lung qi, making it easier for

the patient to contract external evil. Repeated contractions exacerbate the damage to lung qi, and the condition develops into one of internal damage cough.

In patients that have internal damage cough, the disease of the lung weakens the strength of defense qi, making it easy for the patient to contract external evils. This tends to happen especially in when the weather becomes cold.

Chief Points of Pattern Identification

1. Distinguishing external contraction from internal damage

a) External contraction: Cough due to external contraction is a "new disease" (*xin bing* 新病) that starts suddenly and usually lasts for only a short time. It is very often accompanied by lung-defense exterior patterns, and takes the form of evil repletion. Care must be taken to identify the nature of the evil (wind-cold, wind-heat, and wind-dryness).

b) Internal damage: Cough due to internal damage is characterized by enduring or repeated illness. It generally develops gradually, and in its most typical form there are not exterior signs. It usually takes the form of a vacuity-repletion complex and a stem and tip complex. For this reason, it is important to identify root and tip clearly.

Note that to distinguish external contraction from internal damage, one has to understand the history of the disease, not just the present signs.

2. Assessing signs

a) Sound, nature, and time of cough, and exacerbating factors:

A low timid cough sound is a sign of vacuity; a loud resounding cough sound is a sign of repletion.

Cough more prominent in the daytime than nighttime in intermittent bouts, with heavy voice and in some cases itchy pharynx is usually due to

wind heat or wind-cold.

Cough worsening in the afternoon and dusk with single coughs in the night is usually due to lung dryness or yin vacuity.

Cough pronounced when lying down at night that is continual and possibly accompanied by panting is a vacuity cold pattern arising when enduring cough gives rise to panting.

Cough most pronounced in the morning with a heavy turbid sound, and relieved by expectoration of phlegm is generally attributable either phlegm damp or phlegm-heat.

A cough that worsens with the consumption of sweet and fatty foods or raw and cold foods is usually due to phlegm-damp.

A cough worsened by the depression and anger is due to liver fire invading the lung (qi fire).

b) Phlegm (quantity, quality, color, and flavor):

Cough with scant phlegm is usually due to dryness heat, qi fire, or yin vacuity. Cough with scant phlegm is due to phlegm-damp, phlegm heat, or vacuity cold.

Thin white phlegm is a sign of cold; thick white phlegm easily expectorated is a sign of dampness; the yellow phlegm is a sign of heat; sticky white phlegm is a sign of yin vacuity or dryness heat; clear transparent, frothy white phlegm is a sign of vacuity or cold; expectoration of blood with the phlegm usually means lung heat or yin vacuity.

Fishy smelling phlegm is sign of phlegm-heat; sweet-tasting phlegm means phlegm-damp; salty tasting phlegm means kidney vacuity.

Principles of Treatment

Successful treatment depends on distinguishing repletion and vacuity.

External contractions are repletion patterns,

which are treated by dispelling evil and disinhibiting the lung. Treatment is varied according to whether the cause is wind-cold, wind-heat, or wind-dryness. Because the lung is in the upper part of the body, drugs that are light and buoyant should be used, to ensure that the effect reaches the locus of disease. Emphasis is placed on transforming phlegm and disciplining qi, since a cough goes away more easily when phlegm is cleared and qi flows smoothly.

In exterior contractions, there may be exterior signs. But if cough is the main sign, a strong exterior-resolving action is not necessary. Very often we speak of “coursing the exterior” (*shu biao* 表), which is a method of treatment used to free the exterior of evil without necessarily making the patient sweat. Medicinals used to course the exterior are mild exterior-resolving medicinals such as warm acrid perilla leaf (*zi su ye* 紫蘇葉), ledebouriella (*fang feng* 防風), and cool acrid mint (*bo he* 薄荷), mulberry leaf (*sang ye* 桑葉), and pueraria (*ge gen* 葛根).

Internal damage cough is usually evil repletion with internal vacuity. When repletion of the tip is prominent, the treatment is to dispel evil and suppress cough. When root vacuity is predominant, then the emphasis should be placed on supplementing the lung and nourishing right qi (spleen and stomach).

Patterns

The nine cough patterns and treatments given in the *Neikeixue* are here presented in detail. Note that pathomechanism for each sign is given.

External Contractions

1. Wind-cold assailing the lung 風寒襲肺

(feng han xi fei)

- ◎ Heavy voice and rapid breathing < wind-cold fettering the lung, lung qi obstructed and unable to diffuse.
- ◎ Coughing up of thin white phlegm < cold evil depressing the lung, preventing qi from distributing liquid, so that liquid gathers to form phlegm.
- ◎ Headache, painful limbs, aversion to cold, fever, and absence of sweating < wind-cold fettering the exterior and lying depressed in the muscular exterior.
- ◎ Thin white tongue fur < wind-cold exterior pattern.
- ◎ Floating or tight, floating pulse < Floating reflects wind, while tight reflects the cold.

Treatment

Course the exterior and dissipate cold; diffuse the lung and suppress cough.

Rough and Ready Three Decoction (jia wei san ao tang 加味三拗湯)

This formula diffuses the lung and dissipates cold. It treats wind-cold cough with copious phlegm, nasal congestion and heavy voice, fullness in the chest and rapid breathing.

It contains: ephedra (*ma huang* 麻黃) which diffuses the lung and suppresses cough; apricot kernel (*xing ren* 杏仁), which disinhibits the lung and downbears qi; and licorice (*gan cao* 甘草) which harmonizes the other drugs.

Cough-Stopping Powder (zhi sou san 止嗽散)

The action of this formula is to course wind and diffuse the lung. It treats persistent external contraction cough with itchy pharynx, ungratifying

expectoration, rapid breathing, and red face.

Schizonepeta (*jing jie* 荆芥), platycodon (*jie geng* 桔梗), licorice (*gan cao* 甘草) and tangerine peel (*chen pi* 陳皮) course wind and diffuse the lung, transform phlegm and disinhibit the throat. Aster (*zi yuan* 紫苑) and stemona (*bai bu* 百步) warm, moisten, and suppress cough. Cynanchum (*bai qian* 白前) downbears qi and dispels phlegm.

Both formulas diffuse the lung, suppress cough, and transform phlegm. The former chiefly diffuses the lung and dissipates cold. The latter courses wind and moistens the lung, and treats persistent cough and residual exterior evil.

Variation

If there is a phlegm-damp complication with cough, sticky phlegm, oppression in the chest, and slimy tongue fur, add pinellia (*ban xia* 半夏), magnolia bark (*hou po* 厚朴), atractylodes (*cang zhu* 蒼朮), and poria (*fu ling* 茯苓) to dry dampness and transform dampness phlegm. If the cold is obstructing heat, with a muffled voice, rapid breathing like panting, thick sticky phlegm, thirst and heart vexation, fever and aversion to cold with little sweating, use Rough and Ready Three Decoction (*jia wei san ao tang* 加味三拗湯) adding gypsum (*shi gao* 石膏), mulberry root bark (*sang pi* 桑皮), and scutellaria (*huang qin* 黃芩). The ephedra (*ma huang* 麻黃) and apricot kernel (*xing ren* 杏仁) diffuse lung qi and resolve the exterior cold, while gypsum clear internal heat.

2. Wind-heat invading the lung 風熱犯肺 (*feng re fan fei*)

- ◎ Acute cough with rough breathing or in some cases a hoarse voice < wind-heat invading the lung and causing nondiffusion of lung qi.
- ◎ Dry, sore throat and thirst < lung damaging

liquid.

- ◎ Thick sticky phlegm or thick yellow phlegm with ungratifying expectoration, in some cases, runny nose with yellow nasal mucus < lung heat concentrating fluids into phlegm.
- ◎ During bouts of coughing, there is baking fever and sweating, painful limbs, aversion to wind, generalized fever, and headache < wind-heat invading the lung disharmony of the defense and wind-heat lying depressed in the muscular exterior.
- ◎ A thin yellow tongue fur < wind-heat.
- ◎ Rapid floating pulse < floating reflects wind; rapid reflects heat.

Treatment

Course wind and clear the lung; transform phlegm and suppress cough.

Mulberry Leaf and Chrysanthemum Beverage (*sang ju yin* 桑菊飲).

The action of this formula is to course wind and clear heat, and to diffuse the lung and suppress cough. It is used for cough with sticky phlegm, dry throat, and slight generalized fever. It contains mulberry leaf (*sang ye* 桑葉), chrysanthemum (*ju hua* 菊花), forsythia (*lian qiao* 連翹), and mint (*bo he* 薄荷), which course wind and clear heat. It contains platycodon (*jie geng* 桔梗), apricot kernel (*xing ren* 杏仁), and licorice (*gan cao* 甘草), which diffuse the lung, suppress cough, and transform phlegm. It also contains phragmites (*lu gen* 蘆根), which clears heat and engenders liquid.

Variation

For severe cough, add peucedanum (*qian hu* 前胡), arctium (*niu bang zi* 牛蒡子), bamboo

sugar (*tian zhu huang* 天竹黃), zhejiang fritillaria (*da bei mu* 大貝母), and loquat leaf (*pi pa ye* 枇杷葉), which clear heat and diffuse lung qi, as well as transform phlegm and suppress cough.

For pronounced heat, add gardenia (*zhi zi* 梔子), scutellaria (*huang qin* 黃芩), and anemarrhena (*zhi mu* 知母) to clear the lung and drain heat.

For sore throat and hoarse voice, add belamcanda (*she gan* 射干), red peony (*chi shao* 赤芍), lantern plant calyx (*gua jin deng* 掛金燈), native achyranthes (*tu niu xi* 土牛膝), to clear heat and disinhibit the throat.

If there are signs of summerheat add Six to One Powder (*liu yi san* 六一散) to clear and resolve summerheat evil. For heat damaging lung liquid add adenophora (*nan sha shen* 南沙參) and trichosanthes root (*hua fen* 花粉).

3. Wind-dryness damaging the lung 風燥傷肺 (*feng zao shang fei*)

- ◎ Dry cough < dryness evil invading the lung depriving the lung of moisture and causing lung qi to ascent counterflow.
- ◎ Dry sore throat, dry lips, mouth, and nose < damage to liquid.
- ◎ Scant, sticky, sometimes filamentous phlegm that is not easily expectorated < dryness heat condensing fluids into phlegm.
- ◎ Cough with chest pain and phlegm streaked with blood < phlegm-heat damaging the network vessels of the lung.
- ◎ Nasal congestion, headache, mild aversion to cold, and fever < wind-dryness assailing the exterior causing disharmony of the defense and the exterior.
- ◎ Most commonly occurring in the autumn < dryness evil and wind-heat combining to form

“warm dryness” (*wen zao* 溫燥).

- ◎ Red tongue with scant liquid and a rapid floating pulse < wind-heat.

Treatment

Course wind and clear the lung; moisten dryness and suppress cough.

Mulberry and Apricot Kernel Decoction (*sang xing tang* 桑杏湯)

This formula clears, diffuses, cools, and moistens. It is used for externally contracted wind-heat-dryness evil causing damage liquid and giving rise to dry cough with scant, sticky phlegm, thirst, generalized fever, and headache.

The mulberry leaf (*sang ye* 桑葉) and fermented soybean (*dou chi* 豆豉) course wind and resolve the exterior. Gardenia (*zhi zi* 梔子) clears and discharged lung heat. Apricot kernel (*xing ren* 杏仁) and Zhejiang fritillaria (*xiang bei* 象貝) transform phlegm and suppress cough. Adenophora/glehnia (*sha shen* 沙參) and pear peel (*li pi* 梨皮) moisten the lung and engender liquid.

Variation

For pronounced damage to liquid, add ophiopogon (*mai men dong* 麥門冬) and ovate atractylodes (*yu zhu* 於朮) to nourish yin and engender liquid.

For pronounced heat signs, add gypsum (*shi gao* 石膏) and anemarrhena (*zhi mu* 知母) to clear the lung and discharge heat.

For blood in the phlegm, add imperata (*bai mao gen* 白茅根) to cool the blood and staunch bleeding.

The above condition is one of dryness with heat signs. But dryness may also occur in patterns with signs similar to wind-cold. This is called “cool

dryness" (*liang zao* 涼燥). It is characterized by cough with scant phlegm or no phlegm, dry nose and pharynx, as well as aversion to cold, fever, headache, and absence of sweating, a dry thin white tongue fur. Choice of medicinals accords with the principle of *warm but not not dry, and moist but not cool*.

A representative formula is Apricot Kernel and Perilla Powder (*xing su san* 杏蘇散) combined with aster (*zi yuan* 紫苑), tussilago (*kuan dong* 款冬), and stemona (*bai bu* 百步). For pronounced aversion to cold and absence of sweating, schizonepeta (*jing jie* 荊芥) and ledebouriella (*fang feng* 防風) can be added.

Internal Damage

4. Phlegm-damp brewing in the lung 痰濕蘊肺 (*tan shi yun fei*)

- ◎ Cough occurring in repeated episodes and characterized by a heavy turbid sound < phlegm-damp ascending to obstruct lung qi.
- ◎ Sticky slimy phlegm or thick chunky phlegm that is copious and easily expectorated < spleen damp engendering phlegm.
- ◎ Copious phlegm in the morning or after meals, and exacerbated by eating sweet and fatty foods < impairment of splenic movement and transformation.
- ◎ Oppression in the chest, fullness in the area of the stomach, and nausea < phlegm-damp obstructing the center.
- ◎ Small intake of food, physical fatigue, stool that is sometimes thin and sloppy < spleen qi vacuity.
- ◎ White slimy tongue fur and a slippery soggy pulse < copious internal spleen-damp.

Treatment

Fortify the spleen and transform dampness; transform phlegm and suppress cough.

Two Matured Ingredients Stomach-Calming Powder (*er chen ping wei san* 二陳平胃散).

Dries dampness and transforms phlegm rectifies qi and harmonizes the center. Treats cough with copious thick phlegm, oppression in the chest and fullness in the stomach, and slimy tongue fur. Atractylodes (*cang zhu* 蒼朮), pinellia (*ban xia* 半夏), and poria (*fu ling* 茯苓) dry dampness and transform phlegm. Magnolia bark (*hou po* 厚朴), tangerine peel (*chen pi* 陳皮), and licorice (*gan cao* 甘草) rectify qi and harmonize the center.

Three-Seed Filial Devotion Decoction (*san zi yang qin tang* 三子養親湯).

Downbears qi and transforms phlegm. Treats phlegm turbidity congesting the lung, causing cough and copious phlegm, fullness in the chest and rapid breathing, and a slimy turbid tongue fur. White mustard (*bai jie zi* 白芥子) warms the lung and dispels phlegm. Perilla fruit (*su zi* 蘇子) downbears qi and moves phlegm. Radish seed (*lai fu zi* 萊服子) disperses food and transforms phlegm.

Variation

For cough counterflow, copious phlegm, oppression in the chest, and rapid breathing, add cynanchum (*bai qian* 白前), downbears qi and transforms phlegm.

For pronounced cold phlegm, with sticky white frothy phlegm and fear of cold, add dried ginger (*gan jiang* 干薑) and asarum (*xi xin* 細辛) to warm the lung and transform phlegm.

For spleen vacuity arising from enduring illness with fatigue and lack of strength, add codonopsis (*dang shen* 黨參) and ovate atractylodes (*bai zhu* 白朮).

5. Phlegm-heat depressed in the lung 痰熱鬱肺 (*tan re yu fei*)

- ◎ Cough with rough, hasty breathing, in some cases with frog rale in the throat < phlegm-heat congesting the lung and impairing depurative downbearing.
- ◎ Copious thick, sticky, yellow phlegm, possibly with a fishy smell, and difficult to expectorate < heat condensing liquids to form phlegm.
- ◎ Expectoration of bloody phlegm, with pain fullness and distension in the chest and rib-sides and pain on coughing < heat damaging the network vessels of the lung.

Treatment

Clear heat and depurate the lung; transform phlegm and suppress cough.

Variations of *Metal-Clearing*

Phlegm-Transforming Decoction (*qing jin hua tan tang* 清金化痰痰).

This formula clears heat and transforms phlegm, and is used to treat cough with rapid breathing, with thick yellow phlegm, fullness in the chest, possibly with generalized fever. The mulberry root bark (*sang bai pi* 桑白皮), scutellaria (*huang qin* 黃芩), and gardenia (*zhi zi* 梔子) clear and discharge lung heat. Fritillaria (*bei mu* 貝母), trichosanthes seed (*gua lou ren* 瓜蒌仁), platycodon (*jie geng* 桔梗), red tangerine peel (*ju hong* 橘紅), and poria (*fu ling* 茯苓) suppress cough and transform phlegm. Ophiopogon (*mai men dong* 麥門冬) and anemarrhena (*zhi mu* 知母) nourish yin and

transform phlegm.

Variation

For pus-like yellow phlegm possibly with a fishy smell, add houttuynia (*yu xing cao* 魚腥草), wild buckwheat root (*kai jin suo* 開金鎖), coix (*yi yi ren* 薏苡仁), and wax gourd seed (*dong gua ren* 冬瓜仁) to clear the lung and transform phlegm.

For fullness in the chest, cough counterflow, welling phlegm, and constipation, add tingli (*ting li zi* 葶藶子) and refined mirabilite (*fen hua xiao* 風化硝) to drain the lung and expel phlegm.

For phlegm heat damaging liquid with thirst, dry mouth, red tongue with scant liquid, add adenophora/glehnia (*sha shen* 沙參), ophiopogon (*mai men dong* 麥門冬), asparagus (*tian men dong* 天門冬), and trichosanthes root (*tian hua fen* 天花粉).

6. Liver fire invading the lung 肝火犯肺 (*gan huo fan fei*)

- ◎ Cough and counterflow qi ascent with cough occurring in bouts < liver depression transforming into fire, liver qi ascending counterflow, and impairing depurative downbearing.
- ◎ Red face when coughing, bitter taste in the mouth, and dry pharynx < liver fire flaming upward.
- ◎ Scant, sticky phlegm, sometimes thready, and difficult to expectorate < liver fire tormenting metal, condensing fluids into phlegm.
- ◎ Distension and pain in the chest and rib-side, with cough giving rise to pain < disharmony of liver and lung.
- ◎ Thin, yellow tongue fur with scant liquid <

depressed fire causing damage to yin.

- ◎ Rapid stringlike pulse < stringlike indicates liver effulgence, and rapid is a heat sign.

Treatment

Clear the lung and calm the liver; discipline qi and downbear fire.

White-Draining Powder (*xie bai san* 瀉白散) combined with **Indigo and Clamshell Powder** (*dai ge san* 黛蛤散).

Disciplines qi and downbears fire; drains the lung and transforms phlegm. It is used to treat cough counterflow and hasty breathing, heat vexation, dry mouth with bitter taste, and inhibited chest and diaphragm. Mulberry root bark (*sang bai pi* 桑白皮) lycium root bark (*di gu pi* 地骨皮), scutellaria (*huang qin* 黃芩), and anemarrhena (*zhi mu* 知母) clear heat and drain fire. Platycodon (*jie geng* 桔梗) and unripe tangerine peel (*qing pi* 青皮) which transform phlegm and discipline qi. Licorice (*gan cao* 甘草), and non-glutinous rice (*geng mi* 粳米), harmonize the center and fortify the spleen, and prevent the lung-draining action from damaging the spleen and stomach. Indigo Power (*qing dai san* 青黛散) clears the liver and transforms phlegm.

The two formulas combined cause qi fire to bear downwards, and lung qi to be cleared and depurated.

Variation

For effulgent fire, add gardenia (*zhi zi* 梔子) and moutan (*mu dan pi* 牡丹皮) to clear the liver and drain fire.

For oppression in the chest and counterflow qi, add bitter orange (*zhi ke* 枳殼) and inula flower (*xuan fu hua* 旋覆花).

For chest pain, add curcuma (*yu jin* 郁金) and loofah (*si gua luo* 絲瓜絡) to rectify qi and harmonize the network vessels.

For sticky phlegm that his hard to expectorate, add pumice (*hai fu shi* 海浮石), anemarrhena (*zhi mu* 知母), fritillaria (*bei mu* 貝母) to clear the lung and tranform phlegm.

For depressed fire and damage to liquid, add adenophora/glehnia (*sha shen* 沙參), ophiopogon (*mai men dong* 麥門冬), trichosanthes root (*tian hua fen* 天花粉), and chebule (*he zi* 訶子) to nourish yin, engender liquid, and constrain the lung.

For blood in the phlegm arising when liver fire invades the lung and scorches the network vessels of the lung, use larger quantities of Indigo and Clamshell Powder (*dai ge san* 黛蛤散) and add moutan (*mu dan pi* 牡丹皮) and lotus root node (*ou jie* 藕節).

7. Depletion of lung yin 肺陰虧耗 (*fei yin kui hao*)

- ◎ Short, hasty cough < depletion of lung yin, with vacuity fire scorching the inner body, and the lung being deprived of moisture and failing to bear downwards
- ◎ Scant sticky white phlegm, possibly streaked with blood < vacuity fire scorching liquid and giving rise to phlegm, and damage to the network vessels of the lung.
- ◎ Dry mouth and through with gradually hoarsening of the voice < yin vacuity and lung dryness, with liquid failing to bear upward
- ◎ Red cheeks, postmeridian tidal fever, heat in the palms and soles, night sweating < effulgent yin vacuity fire

- ◎ Emaciation < yin essence failing to provide nourishment
- ◎ Red tongue body with scant fur and a fine rapid pulse < yin vacuity with internal heat

Treatment

Enrich yin and moisten the lung; suppress cough and transform phlegm.

Variations of *Adenophora/Glehnia and Ophiopogon Decoction (sha shen mai dong tang 沙參麥冬湯)*.

This formula is sweet and cold and nourishes yin, moistens dryness, and engenders liquid. It is used to treat lung dryness and damage to yin, with dry cough and scant phlegm, thirst, dry throat, and internal heat.

In this formula, adenophora/glehnia (*sha shen 沙參*), ophiopogon (*mai men dong 麥門冬*), solomon's seal (*yu zhu 玉竹*), and trichosanthes root (*tian hua fen 天花粉*) enrich and nourish lung yin, engender liquid and moisten dryness. Lablab (*bai bian dou 白扁豆*) and licorice (*gan cao 甘草*), harmonize and nourish stomach qi. Mulberry leaf (*sang ye 桑葉*) clears and discharges lung heat.

Variation

For acute cough, add Sichuan fritillaria (*chuan bei 川貝*), sweet apricot kernel (*tian xing ren 甜杏仁*), steamed stemona (*zheng bai bu 蒸百步*), moisten the lung, transform phlegm, and suppress cough.

For cough and hasty breathing, add schisandra (*wu wei zi 五味子*) and chebule (*he zi 訶子*) to constrain the lung.

For tidal fever, add mahonia (*gong lao ye 功勞葉*), lanceolate stellaria (*yin chai hu 銀柴胡*), sweet wormwood (*qing hao 青蒿*), tortoise

plastron (*bai gui jia 敗龜甲*), and picrorhiza (*hu huang lian 胡黃連*) to clear vacuity heat.

For night sweating, add mume (*wu mei 烏梅*) and light wheat (*fu xiao mai 浮小麥*).

For expectoration of sticky yellow phlegm, add mactra clam shell powder (*ge fen 蛤粉*), anemarrhena (*zhi mu 知母*), and scutellaria (*huang qin 黃芩*) to transform phlegm and clear heat.

For blood in the phlegm, add peony (*mu dan pi 牡丹皮*), gardenia (*zhi zi 梔子*), and lotus root node (*ou jie 藕節*).

8. Lung qi vacuity 肺氣虛 (fei qi xu)

- ◎ Low forceless cough, with shortness of breath < lung qi vacuity, counterflow qi failing to bear downward.
- ◎ Expectoration of copious clear thin white phlegm < qi vacuity failing to transform liquid, so that liquid turns into phlegm.
- ◎ Fatigued spirit and laziness to talk, and low food intake < dual vacuity of lung and spleen.
- ◎ Bright white complexion, fear of wind, spontaneous sweating, with cough exacerbated by catching colds < lung vacuity and weak defense.
- ◎ Pale tongue fur, and a fine weak pulse < qi vacuity.

Treatment

Supplement qi and warm the lung; suppress cough and transform phlegm

Lung-Warming Decoction (wen fei tang 溫肺湯)

This formula warms and nourishes lung qi, and treats lung vacuity cold with enduring cough and panting, cold pain in the chest, and copious frothy

phlegm.

The ginseng (*ren shen* 人參) supplements lung qi. Cinnamon bark (*rou gui* 肉桂) warms kidney qi. Dried ginger (*gan jiang* 乾薑) warms the center. Stalactite (*zhong ru shi* 鐘乳石) is a heavy settler that promotes qi absorption. Pinellia (*ban xia* 半夏), red tangerine peel (*ju hong* 橘紅), and saussurea (*mu xiang* 木香) warm the spleen and transform phlegm, and rectify qi and harmonized the stomach. Licorice (*gan cao* 甘草) harmonizes all the other medicinals.

Variation

For copious clear thin phlegm, add white mustard (*bai jie zi* 白芥子) and asarum (*xi xin* 細辛) to warm the lung, dissipate cold and transform rehum.

For fear of cold and cold limbs, add aconite (*fu zi* 附子) to warm kidney yang.

For cough counterflow and shortness of breath that is exacerbated by physical movement, add psoralea (*bu gu zhi* 補骨脂), chebule (*he zi* 訶子), and aquilaria (*chen xiang* 沉香) to supplement the kidney and promote qi absorption.

9. Cold-rheum lying deep in the lung 寒飲伏肺 (*han yin fu fei*)

- ◎ Cough with rapid breaking, phlegm rale in the throat, and inhibited breathing, fullness and oppression in the chest and diaphragm < phlegm-rheum (*tan yin* 痰飲) ascending counterflow, lung qi failing to bear downward
- ◎ Expectoration of clear frothy thin white phlegm < non-distribution of qi and phlegm-rheum collecting internally.
- ◎ Exacerbation by cold winter weather, and other signs such as physical cold, cold back

and desire for warm drinks < yang vacuity and yin exuberance

- ◎ White glossy tongue fur < white means cold, and glossy mean phlegm damp
- ◎ Fine stringlike, slippery pulse < fine reflects thin form of phlegm); and slippery is phlegm-damp.

Treatment

Warm the lung and transform phlegm.

Variations of Minor Green-Blue Dragon

Decoction (*xiao qing long tang* 小青龍湯)

This formula effuses the exterior and warms the interior. It is used to treat lying hidden in the interior, which after contraction of cold gives rise to cough and panting and copious phlegm that is white, sticky and frothy, combine with aversion to cold and fever and generalized pain. This pattern is one of cold in the interior and exterior.

In the formula, ephedra (*ma huang* 麻黃) and cinnamon twig (*gui zhi* 桂枝) diffuse the lung and dissipate cold. The peony (*shao yao* 芍藥) help the cinnamon twig (*gui zhi* 桂枝) to harmonize construction and defense (*ying wei* 營衛). The asarum (*xi xin* 細辛), dried ginger (*gan jiang* 乾薑), and pinellia (*ban xia* 半夏) warm the lung and transform rehum. The schisandra (*wu wei zi* 五味子) constrains the lung and suppress cough. Licorice (*gan cao* 甘草) harmonizes all the other medicinals.

Variation

For cough and copious phlegm, add belamcanda (*she gan* 射干), tingli (*ting li zi* 葶藶子), perilla fruit (*su zi* 蘇子), cynanchum (*bai qian* 白前), and inula (*jin fei cao* 金沸草) downbear qi, transform phlegm, and settle panting.

Expectoration of sticky, slimy phlegm with oppression in the chest, and a thick tongue fur, add Sichuan magnolia (*chuan po* 川朴), tangerine peel (*chen pi* 陳皮), radish seed (*lai fu zi* 萊菔子), and white mustard (*bai jie zi* 白芥子) rectify qi and transform phlegm. If triggered by external contraction, and rheum evil lies depressed and transforms into heat, remove the asarum (*xi xin* 細辛), cinnamon twig (*gui zhi* 桂枝) and dried ginger (*gan jiang* 乾薑), and add mulberry root bark (*sang pi* 桑皮), gypsum (*shi gao* 石膏), and anemarrhena (*zhi mu* 知母).

References

- Chao Y-F 隋·巢元方 (Sui Dynasty) *Zhubing Yuanhoulun* (諸病源候論 "The Origins and Outcomes of Disease"). 1981, Taipei, National Research Institute of Chinese Medicine 臺北, 立中國醫藥研究所.
- Zhang1 B-Y 張伯與 (1989) *Zhongyi Neikexue* (中醫內科學 "Chinese Internal Medicine"), Advanced Chinese Medical College Reference Series). Taipei, Chihyin Publications 臺北, 知音出版社.

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