Session 2

Lung pathologies

- **Common cold** (*Gan Mao*, 感冒) & **influenza** (*Liu Gan*, 流感)

Chinese Medicine Department
Session Content

- **Briefly review:**
  - CM Lung physiology functions, pathway, acu-points & indication of Lung primary channel (and collaterals).
  - Respiratory system physio-pathology.

- **Discuss** Common Cold and Influenza (Gan Mao 感冒 & Liu gan 流感) mainly from CM perspective.

- **Practical:** session topic relevant clinical skills practice and case study.
Session Rationale

- This session includes the general TCM diagnostic tools & procedures, diagnostic differentiation and treatments for common cold and influenza.

- There will be a practical tutorial for students to develop assessment, diagnosis and treatment skills.

- The aim of this session for students is by applying TCM theoretical knowledge and skills to develop critical analysis and appropriate clinical perspective in the TCM assessment, diagnosis & differentiation, treatment and prognosis for common cold and influenza.
Session Learning outcomes

- Understand in-depth TCM physiology and pathology of the Lung.
- Define common cold / influenza, understand the differences between common cold and influenza.
- Describe TCM etiology and pathogenesis of common cold and influenza.
- Identify and differentiate the TCM patterns of common cold / influenza.
- Outline the TCM treatment (or management) for each pattern of Common Cold/ influenza and understand CM prevention for it.
• Revision

Lung Zang & LU Channel system
& Respiratory system
Physiopathology
Functions of the Lung Zang

- Governing qi and controlling respiration
- Controlling disseminating and descending
- Regulating the water passages
- Controlling the skin and body hair
- Opening into the nose

Deadman 2007, p. 75
The Lung (LU) Hand Tai Yin Primary Channel

Regular Points
11 points

Connecting Zang Fu
Lung   Large Intestine   Stomach

Main Channel Connections with other channels
Nil
Pathway of the Lung Channel

Deadman, Al-Khafaji & Baker 2007, p. 73
Main Acu-points on LU channel and Indications

Main points & classification:

**LU1:** Front-Mu point; the Crossing point of the LU&SP Meridian.

**LU7:** Luo-Connecting point; Master Point of Ren Meridian (couple with KID 6); Command point of head and neck

**LU9:** Yuan-Source point; Shu-Stream point of LU channel; Converging point of Vessels

Main pathological changes/ main indications:

Acupuncture points are indicated for throat, chest and lung ailments and for the other symptoms that are presented along the meridian’s pathway
Clinical Uses of the Lung Channel

Actions and indications of any channel are dictated by the channel pathway and the functions of the organs that the channel connects with internally.
Respiratory System

3D anatomy and physiology:
https://search-alexanderstreet-com.ezproxy.endeavour.edu.au/view/work/bibliographic_entity%7Cvideo_work%7C2065688
CMAC223 Session 2

Common Cold & Influenza
Bio-medical Perspective
Cold & Flu
Common Cold VS Influenza

- Both are upper respiratory illnesses mostly caused by different viruses.
- It can be difficult to tell the difference between them based on symptoms alone due to some similar symptoms:
  - Runny nose, Nasal congestion
  - Sore throat
  - Red, watery eyes
  - Loss of energy
  - Cough

Bio-meds: Flu

F    Fever
A    Aches
C    Chills
T    Tiredness
S    Sudden onset

In general, Flu is worse than common cold and it can hit at any time of year with high trend of developing into a serious complication such as pneumonia, especially in young children, older adults, pregnant women, and people with immunocompromising health conditions (i.e. asthma, heart disease or diabetes)
Compare: cold and flu

**Cold**
- Symptoms could build over 48 hours;
- Runny nose, watery eyes;
- Stuffy nose and congestion;
- Sneezing and coughing;
- Symptoms may last 3-10 days

**Flu**
- Fast onset of symptoms;
- Fever and chills;
- Body aches and pains;
- Weakness and fatigue;
- Symptoms may last 7-14 days or may linger for up to 3 wks;
- (In general, the flu is worse than the common cold; Colds generally do not result in serious health problems, such as pneumonia, bacterial infections, etc.)
Cold and Flu
Prevention and Management

Bio-meds prevention & management/treatment (briefly):

- Bio-meds prevention of common cold
- Bio-meds treatment of common cold
- Bio-meds prevention of influenza
- Bio-meds treatment of influenza
Useful Links

Define Common cold (感冒):

- is also called Wind-Injury, a frequently recurring disorder CAUSED BY ATTACKS OF EXTERIOR PATHOGENIC WIND. It manifests with nasal congestion, runny nose and sneezing, coughing, headache, aversion to cold, fever and general discomfort.

- The underlying pathologies are failure of Lung Qi to disperse and inability of protective Qi to consolidate the surface of the body.
Common Cold- Gan Mao 感冒 (cont.)

- The pathway of Wind attack is the Lung system and the Defensive exterior, and the location of the illness is generally also limited to the Lung-Defensive level.

- Mostly it results from strong exogenous Wind, but if the patient is exposed to Wind while the body is deficient the result may be an illness of root-deficiency and appearance/branch-strength.

Common cold is **not** a season specific, however it’s more common in winter and spring; Generally it has a short course and rapid recovery.

In contrast, epidemic cold (Liu Gan, 流感) and cold in those with weak constitutions, such as the elderly and infants, tend to develop complications that make recovery difficult.

To a certain degree, common cold is contagious in that it may spread from one to another.
Etiological factor: ‘External Wind’

The concept of Wind (Feng, 風) in Chinese medicine:

- One of the six exterior pathogens, the chief of the six climatic pathogenic evils.
- If the Righteous Qi is intact, exterior pathogens will not be able to penetrate through the Protective Qi.
- Exterior Wind invading into body may be combined with cold, heat, dampness and dryness.
- Exterior Wind penetrates via skin, nose and throat and interferes with the circulation of Defensive Qi (Wei Qi, 卫气) in the space between skin and muscle.
Interior pathogens or pre-existing deficiency

- **Lung Qi is Deficient** which means that its function of impaired D & D
  - Because if this impairment, the Wei Qi can not consolidate the surface

- **Phlegm Fire and Phlegm Damp**
  - Means that the Lung Qi can not regulate the Wei Qi
  - Wei qi impairment allows exterior pathogens to easily invade via skin
Interior pathogens or pre-existing deficiency

"constitutional deficiency is associated with susceptibility to certain exterior pathogens."

• A person with pre-exiting Qi/Yang xu—wind-cold attack propensity
• A person with pre-exiting Blood/Yin xu—wind-heat attack propensity
Main manifestations of Common cold

- Fever **
- Aversion to cold **
- Nasal congestion
- Runny nose & sneezing
- Cough
- Headache
- General discomfort
- Short course, rapid recovery ** (it lasts 3–7 days. Its course seldom varies)

** key features of common cold
TCM etiology & Pathogenesis of Common Cold
Two Perspectives

- **Exterior (factors):** Wind – combines something (heat, cold, Damp, dryness, etc.)

  **PLUS**

- **Interior (factors):**
  - insufficient Wei Qi/Righteous Qi
  - Phlegm Fire/Heat and Phlegm Damp
External Pathogenic Wind combines with other pathogens

Wind cold
Wind heat
Wind dry

Wind dry combines with other pathogens

Wei Qi impaired

open pores & impaired Lung descending function (Wei Qi Xu)

obstructs the clear Yang

Wei qi fails to consolidate surface

Lung unable to regulate Wei Qi

Prone to wind-cold
Prone to wind-heat; wind-dry
Prone to damp invasion

Interior Pathogenic Influences; pre-existing deficiency

Insufficient righteous qi

Pre-existing phlegm-fire; phlegm dampness in lung

Yang Xu

Yin Xu
Phlegm-damp

summer heat-dampness

Summarized: Common cold

Exterior pathogens invade
Common Cold
Etiology & Pathogenesis

- Exterior wind combines with other exterior pathogens and invades via the skin, nose and throat into human body.

- Although the main cause is the Wind evil, its development is closely related to the strength or weakness of the body’s genuine Qi/Righteous Qi.

- Pathogens impairs Wei Qi & Lung D (descending & distributing) functions
Extra reading for students (outside class):

The Concept of Wind in Traditional Chinese Medicine

Diagnosis and Treatments
Differential methods for Exterior Syndrome

- Four levels differentiation
- Six meridians (divisions)/ stages of exterior pathologies
- ZangFu differentiation
- Sanjiao/ Triple Energizer differentiation
- Eight Principles differentiation
Diagnosis and Differentiation

- **Diagnosis (set text p4-5):**
  1) Identification of mild, severe and epidemic cold (see table in next slide)
  2) Differentiation diagnosis of common cold and wind-warm febrile disease:
     - Have similar signs and symptoms
     - Different “fever” nature
     - Warm febrile disease diagnosis- Four levels (wei, qi, ying & Xue) diagnosis usually is applied

- **Basic patterns of common cold**
## TCM perspectives (set text P4):

### Common Cold VS Flu (Epidemic Cold)

<table>
<thead>
<tr>
<th></th>
<th>Common Cold</th>
<th>Epidemic Cold (Flu, 流感)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathogens</strong></td>
<td>Exterior pathogenic factors, primarily wind</td>
<td>Epidemic contagious pathogens</td>
</tr>
<tr>
<td><strong>Season</strong></td>
<td>Winter-spring; sporadic occurrence</td>
<td>Non-seasonal; pandemic occurrence in local population</td>
</tr>
<tr>
<td><strong>Severity</strong></td>
<td>Mild and no significant systemic symptoms</td>
<td>Sever and systemic involvement</td>
</tr>
<tr>
<td><strong>Progress</strong></td>
<td>Mild and superficial with mild or no internal invasion</td>
<td>Fast invasion into the interior with primary or secondary complications</td>
</tr>
</tbody>
</table>
Patterns of common cold

- Wind-cold (WC)
- Wind-heat (WH)
- Summer-heat (damp heat) -- SDH
- Pre-existing Qi xu with External pathogens invasion
- Pre-existing Yin xu with invasion of External pathogens

Key Points of Analysis:

- Wind-Cold and Wind-Heat (cold/heat?)
- Accompanying Pathogenic Evils
- Strength and Deficiency (Shi and Xu/ excessive and deficient)

* Lecturer please facilitate students fill the table below to do the patterns identification of Common cold.
<table>
<thead>
<tr>
<th>Patterns</th>
<th>Main S&amp;S</th>
<th>Major accompanying S&amp;S</th>
<th>Tongue</th>
<th>Pulse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind-Cold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wind-Heat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer heat-damp</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qi Xu with exterior invasion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yin Xu with exterior invasion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Comparison of Wind-cold and Wind-Heat

<table>
<thead>
<tr>
<th></th>
<th>Wind-Cold</th>
<th>Wind-Heat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathology</strong></td>
<td>Wind-cold</td>
<td>Wind-Heat</td>
</tr>
<tr>
<td><strong>Penetration of pathogenic factor</strong></td>
<td>Via skin</td>
<td>Via nose &amp; mouth</td>
</tr>
<tr>
<td><strong>Fever</strong></td>
<td>None/Light</td>
<td>high</td>
</tr>
<tr>
<td><strong>Aversion to cold</strong></td>
<td>Pronounced</td>
<td>slight</td>
</tr>
<tr>
<td><strong>Body aches</strong></td>
<td>severe</td>
<td>slight</td>
</tr>
<tr>
<td><strong>Thirst</strong></td>
<td>none</td>
<td>Slight-medium</td>
</tr>
<tr>
<td><strong>Headache</strong></td>
<td>Occipital</td>
<td>Whole head</td>
</tr>
<tr>
<td><strong>Sweating</strong></td>
<td>No/slight (head)</td>
<td>Slight-medium</td>
</tr>
<tr>
<td><strong>Tongue &amp; Pulse</strong></td>
<td>Thin-white coat; floating tight pulse</td>
<td>Slightly red sides and thin-yellow coat; floating- rapid pulse</td>
</tr>
</tbody>
</table>

See Table 48.1 on page 1319

Common Cold CM treatment (management)

World Health Organisation (WHO) included certain upper respiratory tract & respiratory system disorders in it’s 1979 list of amenable diseases to acupuncture:

- Common cold
- Acute bronchitis
- Bronchial asthma

*Based on clinical experience more than controlled clinical research trials*
CM Management

Follow the principle that states” For those pathogenic factors that stay in the superficial layer, induce sweating to release them”.

- **The primary treatment** for the common cold is to release the exterior by inducing sweating:
  - WC: acrid and warm *herbs* to release the exterior
  - WH: acrid and cold *herbs* to release the exterior
  - SDH: Clear SH, expel damp, release exterior
  - Exterior conditions with pre-exist deficiency: Support the righteous qi to release the exterior
Acupuncture and auxiliary treatment for Common Cold

- **Treatment principles:**
  - Release the exterior
  - Expel wind
  - Restore the diffusing and descending of Lung-Qi

- **Common treatment methods:**
  - Acupuncture
  - Fire cupping/slide cupping
  - Moxa
  - Tuina/acupressure
What meridians and acu-points do you think most involved in the treatment for common cold?

- LU7, LU9, LU5, LU1...
- LI4, LI20...
- BL12 (fengmen), BL13
- GB20 (fengchi), GV16(fengfu)
- GV14, GV20 …
- KI7 reinformcing+LI4 reducing—to cause sweating
## Acupuncture Treatment (Set text page 8 & 9)

- **Prophylactic measures:** BL 12(Fengmen), ST36 (Zusanli)– Moxibusion
- **Pattern differentiation treatments:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>TX principle?</th>
<th>Points</th>
<th>Manipulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior wind-Cold</td>
<td></td>
<td>GV16, BL12, GB20,LU7,LI4</td>
<td>Reducing, Even method or moxa for deficiency</td>
</tr>
<tr>
<td>Exterior wind-heat</td>
<td></td>
<td>GV14, LI11, TE5, LI4,LU10, LU11</td>
<td>Reducing</td>
</tr>
<tr>
<td>Exterior SDH</td>
<td></td>
<td>LU6, LI4, ST36, CV12, TE6</td>
<td>Reducing</td>
</tr>
<tr>
<td>Wind Invasion with Qi Xu</td>
<td></td>
<td>ST36, BL13 + points for WC</td>
<td>Reducing, Even method &amp; moxa for Qi deficiency</td>
</tr>
<tr>
<td>Invasion of Wind with Yin Xu</td>
<td></td>
<td>KI7, BL43</td>
<td>Reducing, Even method &amp; reinforcing for Yin deficiency</td>
</tr>
</tbody>
</table>
A word on Wind Cold

- This pattern exhibits the following symptoms: fever, chills (these are worse than the fever), inability to get warm, nasal or sinus congestion with clear mucus, cough with clear mucus, stiff neck and shoulders, occipital headache (back of head), and a slower-than-normal pulse that is more easily felt at the surface.
Ginger Tea for Wind cold

Diaphoretic (sweating) therapy is especially helpful in this condition, since it warms the body and pushes the pathogen out through the pores.

In the very early stages of this pattern, an effective remedy is miso soup with the white part of spring onion (cong bai) and fresh ginger (sheng jiang).

For more severe or advanced cases, there is a full range of therapies, depending on the combination of symptoms.
Wind Heat

- When treating cold or flu symptoms due to wind heat, the results are always more dramatic if the treatment begins at the earliest possible stage of the illness.

- It is important to get adequate rest, a vacation from sources of stress, and good nutrition in the form of soups and fresh juices.

- Sweets and stimulants (such as caffeinated beverages) cause a rapid progression in the severity of the illness since they tend to feed the pathogen. Why?
Tonifying herbs and Wind Heat / Wind Cold -- yes or no?

- People sometimes make the mistake of taking ginseng when they feel a cold coming on since they have heard that ginseng is good for the immune system.

- Using ginseng in this case is a serious error since ginseng will powerfully feed the pathogen causing the illness, making the person feel much worse. This is traditionally known as "trapping the burglar."

- While tonic herbs can be taken long-term, it is important to **discontinue** their use during a cold or flu. Then, after the pathogen has been expelled from the body, tonic herbs can be taken again to build up strength and vitality over the long-term.

TCM Perspectives to Flu

see set text pages 301-306

- Influenza (Flu) is different from common cold.
- It is caused by **exterior-wind attacking** a person with deficient righteous Qi / inadequate resistance to exterior pathogens.

- In addition, constitutional strength plays an important role in the occurrence of flu.
- Flu is mostly an excess condition, though a pattern of deficiency root with excess branch is apparent in those with deficient righteous Qi.
TCM Perspectives to Flu

- It’s usually named Liu Gan (流感), and viewed under the scope of **epidemic cold** disease due to its severity, pandemic nature and other Key S&S:
  - A sudden and rapid onset
  - Chills, High fever, headache, body aches…
  - Cough-productive or hacking, congested chest and dyspnoea

- It could be referred to TCM differentiation and treatment for common cold and cough, based on the clinical manifestations.
TCM

Diagnosis and Treatment of Flu

- Four Levels differentiation is mostly used in the TCM pattern diagnosis of Flu

- Analysis of primary symptoms:
  - **Fever**: observe the characteristics of fever and the accompanying symptoms; clinic *red flag*...
  - **Productive Cough, congested chest and dyspnoea**: secondary symptoms due to heat accumulation inducing the failure of Lungs’ D&D functions; *(can be referred to session 3 Cough learning content)*
TCM Patterns of Flu

- **Basic patterns:**
  1) Wind-heat attacking the protective level
  2) Pathogenic heat affecting both protective and qi levels
  3) Heat accumulating in the lung
  4) Heat lodged in the pericardium

- **Progression of Pattern** *(see details Set text P304)*
- **Treatment Principles and methods**
- **Relevant events or updated research articles**
- **The role of Chinese Herbal medicine in Flu treatment**
Extra herb formula: Gui Zhi Tang (桂枝汤)
Cinnamon Twig Decoction
Source: Shang Han Lun 伤寒论

Composition: Gui Zhi; Shao Yao; Zhi Gan Cao; Sheng Jiang; Da Zao

Administration: Decoct all ingredients for oral administration
(in Shang Han Lun, shortly after taking the first dose, having the warm, thin gruel and covering the body with a blanket to reinforce the sweating effect of the medicinal, also ideally just get light sweating (for example, the whole body is moist, not flowing sweating as water); if no sweating after taking decoction, take another dose according to the above method.)

Functions and indications: releases exterior; regulates nutritive (ying) qi and defensive (wei) qi; harmonizes the spleen and stomach.

Exterior deficiency syndrome due to externally contracted wind-cold with the manifestations of headache, fever, sweating with aversion to cold, nasal hoarseness, retching, white tongue coating, no thirst, floating and weak pulse.

Contraindications: Excess patterns, external cold with internal heat, wind heat, acute warm or damp heat, internal heat and yin deficiency

Dosage (for patent medicine): 8-12 pills (two to three times a day)
Literature resource for Gui Zhi Tang:

**Shang Han Lun 伤寒论**

**Line 12**

“Tai yang zhong feng, yang fu er yin ruo, yang fu zhe, re zi fa, yin ruo zhe, han zi chu. Se se wu han, xi xì wu feng, xi xì fa re, bi ming gan ou zhe, gui zhi tang zhu zhi”

“In great yang wind strike with floating yang and weak yin, floating yang is spontaneous heat effusion, and weak yin is spontaneous issue of sweat. If (there is) huddled aversion to cold, wetted aversion to wind, feather-warm heat effusion, noisy nose, and dry retching, Cinnamon Twig Decoction governs”

Pinyin: Yin Qiao San (银翘散)
English: Honeysuckle and Forsythia Powder
Source: Wen Bing Tiao Bian 温病条辨

Composition: Yin Hua; Lian Qiao; Jie Geng; Bo He; Niu Bang Zi; Jing jie (Sui); Dan Dou Chi; Lu Gen; Zhu Ye; Sheng Gan Cao

Administration: oral administration.

Functions: Release the exterior with acrid-cool; clear heat and remove toxic substances.

Indications: Warm diseases at the early stage with symptoms of fever, slightly aversion to wind-cold, no sweat or non-smooth sweating, headache, thirst, cough, sore throat. Red tip of tongue, with thin white coating or thin yellowish coating; floating and rapid pulse.

Contraindications: Wind-cold type cold or flu with dominant chills; muscle ache with absence of sweating

Dosage (for patent medicine): 8 tablets (3-4 times per day) or in severe cases every two hours.

Biomedical Indications: anti-pyretic, diaphoretic, anti-inflammatory, antiviral.
Summary and Discussion

- Summarise this session learning
- Discuss Practical hints (Set Text Pg9-10)
- Differ wind-cold and wind-heat
- Avoid excessive diaphoresis
- Constitutional Xu is associated with susceptibility to certain exterior pathogens
- Prophylactic method for complications
Break
Practical Tutorial

* Each student’s attendance and performance in every practical section will be documented and graded according to “Continuous Skill Development (Rubric-based) Assessment Guide” (see details on LMS)
Case Study 1

- Jacqui, 48 years old, presents with a “cold” of 2 days duration. She has a severe distending headache and a fever 38.5°C. She tells you that although she’s a bit warmer then usual, she does not like to go out in the wind. Her nose is congested and when she blows it (which makes her head aches worse) there is yellow discharge. She has a swollen sore throat and the beginnings of a barking cough.
- Tongue: red with thin yellow coat
- Pulse: rapid and floating
Case Study 2

A 19 years old men presents to your clinic suffering from the “flu”. He has a cough (non-productive, stuffy nose which is prone to running (clear watery mucous), sneezing and a strong aversion to cold (he is very rugged up when presenting at the consultation). He has also complained of headaches and general body aches.

Clinical Assessments:
Other: Pale
Pulse: Floating and tight
Tongue: Thin with a white coating
Case Study Questions

Read the above case and answer all of the questions below:

- What is the TCM diagnosis (Disease and Pattern)? Explain your answer.
- What is the TCM treatment principle?
- What TCM treatment methods will you choose to combine in the management for the patient’s condition?
- Choose at least five **acu-points** for your acupuncture prescription to treat this condition based on your diagnosis.
- Give the **rationale** for the above acupuncture points & demonstrate your appropriate **needling techniques** and **WH&S knowledge and skills**.
- Recommend suitable **lifestyle/dietary advice** for this condition based on Chinese Medicine theory.
- How might be the **progress of the patient’s condition** after a course of appropriate treatment has been applied?
Case Study based treatment
Performance/Practice

- Lets “treat” each other according to our diagnosis and treatment that we have figured out from our case study.

- Demonstration and practice of the assessment, diagnosis and TCM treatment of Common cold and flu.

- Demonstration of WH&S skills and sensitiveness of cultural differences.
Main References


COMMONWEALTH OF AUSTRALIA

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