Session 2

Hepato-biliary System Part I

- Materia Medica (from Traditional literature & research):
  - *Bupleurum falcatum*
  - *Berberis vulgaris*
  - *Chelidonium majus*
  - *Curcuma longa*
  - *Cynara scolymus*
Gall Bladder

Gallbladder:

• **Fundus**
• **Body**
• **Neck**

(Tortora & Dickinson, 2014)
Gall Bladder

Herbal medicines can be useful for the treatment or management of:

• Cholecystitis (biliary infection/inflammation).
• Minor/early or established biliary choledolithiasis (biliary stones).
• Conjugated hyperbilirubinaemia.
• Chronic and moderate hepatobiliary disease.

Traditional prescribing includes:

• Bilious conditions, intolerance to alcohol, fats & headaches.
• Systemic ‘toxicity’.
• Chronic constipation due to sluggish digestion.

(Bone & Mills, 2013)
Gall Bladder

Herbal Actions include:
• Choleretics: enhance hepatocyte bile production
• Bitters: have choleretic properties.
• Cholagogues: stimulate the release of bile from the gallbladder (some have choleretic action also).
• Dosage: best 30 minutes before meals in liquid formulation.

Caution for use in:
• Biliary carcinoma.
• Blocked bile duct.
• Acute and severe hepatobiliary disease.

(Bone & Mills, 2013)
**Bupleurum falcatum**

**Plant family:** Apiaceae  
**Parts used:** Root  
**Active Constituents:** Triterpenoid saponins (saikosaponins), polysaccharides.  
**Actions:** Hepatoprotective, anti-inflammatory, immune modulating, nephroprotective, antitussive, diaphoretic.  

(Bone & Mills, 2013)
Bupleurum falcatum

Historical & Traditional Prescribing:

• Alternating chills and fever, liver enlargement, prolapse of uterus and rectum.
• Epigastric pain, nausea, indigestion.
• TCM: Bitter and cold acting as a diaphoretic to regulate and restore gastrointestinal and liver function.

(Bone & Mills, 2013)
Bupleurum falcatum

Cautions / Contraindications / Warnings:
• In TCM contraindicated in cough with weakness (deficient Yin)
• May cause nausea or vomiting (use low dose)
• May sedate some clients.

Herb/Drug Interactions:
• None known.

Pregnancy and Lactation Data:
• No adverse effects expected.

(Bone & Mills, 2013)
### Bupleurum falcatum

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Adult mL/g</th>
<th>Dosage directions &amp; considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td>Side effects: Large doses may act as a sedative, increase bowel movements and cause flatulence, nausea and reflux</td>
</tr>
<tr>
<td>Liquid extract 1:2</td>
<td>25-60mL/week</td>
<td></td>
</tr>
<tr>
<td>Dried root</td>
<td>0.5-3gm/dose</td>
<td>Take up to three times per day</td>
</tr>
</tbody>
</table>

**Taste:** Bitter, cold (Thomsen and Gennat, 2009)

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Berberis vulgaris

Plant family: Berberidaceae
Parts used: Root, stem bark or both.
Active Constituents:
• Alkaloids (berberine), tannins.
Actions:
• Antimicrobial, antibacterial, antiprotozoal, antipyretic, anti-inflammatory, alterative
• Cholagogue, anti-haemorrhagic, anti-diarrhoeal, laxative tonic to spleen causing splenic contractions.

(Bone & Mills, 2013; Fisher, 2009)
Berberis vulgaris

Historical & Traditional Prescribing:

- To cleanse the body of choler, reduce body heat & conditions linked to this: itch, ringworm, scabies, jaundice, bile.
- Renal calculi, soreness and burning of the urinary tract. Blood purification (tea), tonic.
- Topically for mouth ulcers, lip sores, chronic ophthalmia, scalds.

(Bone & Mills, 2013; Fisher, 2009)
Berberis vulgaris

Warnings and Precautions:
• None required.

Herb/Drug Interactions:
• Berberine may reinforce the effects of other drugs that displace the protein binding of bilirubin.

Pregnancy and Lactation Data:
• Berberine containing plants are not recommended for use during pregnancy or for jaundiced neonates.

(Bone & Mills, 2013; Fisher, 2009)
## Berberis vulgaris

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<tr>
<td>Oral</td>
<td></td>
<td>Side effects: high doses of berberine may cause dizziness, nosebleeds, dyspnoea, eye irritation, gastrointestinal irritation, nausea, diarrhoea, nephritis, urinary tract disorders</td>
</tr>
<tr>
<td>Fluid Extract 1:2 (45%)</td>
<td>20-40mL/week</td>
<td></td>
</tr>
<tr>
<td>Decoction</td>
<td>0.5-1gm/dose</td>
<td>Take up to three times per day</td>
</tr>
</tbody>
</table>

**Taste:** Bitter, cold and dry

(Thomsen and Gennat, 2009)
Chelidonium majus

Plant family: Papaveraceae
Parts used: Aerial parts
Active Constituents:
• Alkaloids (Chelidonine), flavonoids, phenolic acids.
Actions:
• Cholagogue, choleretic, mild laxative, anti-inflammatory, spasmolytic, diuretic.
• Topically: antiviral, vulnerary.
  (Bone & Mills, 2013; Fisher, 2009)
**Chelidonium majus**

**Historical & Traditional Prescribing:**

- Used since the Middle ages for skin inflammation & infections, warts, indolent ulcers, fungal growths.
- GIT conditions due to poor liver function, gallbladder inflammation, gallstones, cholecystitis.
- Blood cleanser, diaphoretic (hot infusion).
- Abdomen application for griping & post-partum pain.

(Bone, 2003; Fisher, 2009)
Chelidonium majus

Cautions / Contraindications / Warnings:
• Long term use is not recommended due to the alkaloid content of the herb.
• Pre-existing serious liver disease or damage.

Herb/Drug Interactions:
• None known

Pregnancy and Lactation Data:
• Avoid in pregnancy and lactation
• Category C – risk of causing harmful effects to the foetus or neonate without causing malformations.

(Bone & Mills, 2013)
# Chelidonium majus

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<tr>
<td>Oral</td>
<td></td>
<td>Long term use not recommended (alkaloids)</td>
</tr>
<tr>
<td>Fluid Extract 1:2 (45%)</td>
<td>7-15ml /week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried herb</td>
<td>2-4gm/dose</td>
<td>Take up to three times per day</td>
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</tbody>
</table>

(Bone, 2003; Fisher, 2009)

**Taste:** bitter, pungent, dry 3rd degree, hot 3rd degree

(Thomsen & Gennat, 2009)
Curcuma longa

Plant family: Zingiberaceae
Parts used: Rhizome
Active Constituents: Volatile oil, curcuminoids, minerals, vitamins, polysaccharides.

Actions:
• Anti-inflammatory, antiplatelet aggregation, antioxidant, antimicrobial, depurative.
• Hepatoprotective, neuroprotective, choleretic, hypolipidemic, carminative.

(Blumenthal et al., 2000; Bone & Mills, 2013)
Historical & Traditional Prescribing

- **Western**: jaundice, mild aromatic digestive stimulant.
- **Ayurvedic**: liver disorders, poor digestion, diarrhoea, vomiting of pregnancy. Fevers, catarrhal cough, bites. Externally: eczema, arthritis, ulcers, skin infections
Curcuma longa

Cautions / Contraindications / Warnings

• Biliary tract obstruction & gallstones.
• Cautioned use in female pre-conception, clients with hair loss.
• Topical administration may cause photosensitivity.

Herb/Drug Interactions:

• Additive effect: antiplatelet, anticoagulant (doses higher >15g/day).

Pregnancy and Lactation Data:

• Category A - No adverse effects are expected.

(Bone & Mills, 2013)
**Curcuma longa**

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<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Extract 1:1 (45%)</td>
<td>35-90mL /week</td>
<td></td>
</tr>
<tr>
<td>Dry herb</td>
<td>1-2 g / day</td>
<td></td>
</tr>
<tr>
<td>Powdered extract</td>
<td>1.5-3 g / day</td>
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</tbody>
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(Bone, 2003)

**Taste:** Pungent and warm

(Thomsen & Gennat, 2009)
Cynara scolymus

Plant family: Asteraceae
Parts used: Leaf
Active Constituents:
- Phenolic acids, cynarin, volatile oil, inulin, phytosterols, sugars, flavonoids.

Actions:
- Hepatoprotective, hepatic trophorestorative, choleretic, cholagogue, hypolipidemic, diuretic, antiemetic, depurative.

(Bone & Mills, 2013; Fisher, 2009)
Cynara scolymus

Historical & Traditional Prescribing:
- Jaundice, hypercholesterolemia, anorexia, liver tonic, anti-toxic.
- Clearing the complexion, depurative for itchy skin.
- Rheumatism, arthritis, gout, dropsies.
- Urinary stones, oliguria, uraemia.
- For body odour and snake bites.

(Bone & Mills, 2013; Fisher, 2009)
Cynara scolymus

Cautions / Contraindications:
• Allergy to members of the Asteraceae family.
• Gallbladder obstruction. Under professional supervision in cholelithiasis.

Pregnancy and Lactation Data:
• No adverse effects expected.
• Cynara contains a milk curdling enzyme, so theoretically contra-indicated in lactation.

(Bone & Mills, 2013; Fisher, 2009)
## Cynara scolymus

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<td><strong>Oral</strong></td>
<td></td>
<td>Side effects: Mild and transient infrequent side effects including flatulence, hunger and weakness.</td>
</tr>
<tr>
<td>Fluid extract 1:2 (35%)</td>
<td>15-35mL/ week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried leaf</td>
<td>2gm /dose</td>
<td>Take three times per day</td>
</tr>
</tbody>
</table>

(Bone, 2003; Fisher, 2009)

**Taste:** cold and moist  
(Thomsen & Gennat, 2009)
Recommended Readings


- Globe artichoke monograph p. 466-471,
- Turmeric monograph p 1009-1021.


- *Berberis vulgaris*, p. 59-61,
- *Chelidonium majus*, p. 180-181,
References


References


Tutorial

Session 2
Tutorial – Case Study

Frederick: 69 yo male, BP 120/74, HR 88. Height 172cm, weight 97kg.

Frederick presents with shooting & radiating pain to his abdomen and right shoulder blade following fatty or rich foods. He has experienced recurrent bouts of biliary pain for the last 6 months. His stools are currently pale brown to whitish in colour and he has frequent and loose bowel motions. He has a long history of undigested food in stool and constipation. His symptoms are worse for fatty or rich food.
On questioning, he rates the severity of his pain as 7/10 (0=none, 10=severe)

The pain lasts for 30 minutes to a couple of hours (if a very large meal).

He has brought in X-rays and abdominal ultrasound results that reveal gallbladder inflammation but currently no gallstones.
Tutorial

• Based on this information create short term and long term treatment goals to assist Frederick.
• Treatment goals should identify the symptom/system that you are working on, the herbal action required, and what the herb is doing in the body to effect change.
• Create a list of herbs that fit the actions identified within each goal.
Tutorial

- From this list, choose the herbs that best suit the case and generate a herbal prescription, including a 100mL liquid extract formula.
- Consider other forms of herbal interventions, eg teas, creams, separate herbal liquid extract that would be suited to the case.
- Provide clear dosage instructions to the client on how to take the prescription/s.
- This should include quantity of dose, frequency of dose, timing of dose and any other relevant information.
- Groups discuss their findings with the class.
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