

Extraordinary Organs in Chinese Medicine

《素問·五藏別論篇第十一》

Elementary Questions, Chapter 11

- 《素問·五藏別論篇第十一》 Elementary Questions, Chapter 11 腦、髓、骨、脈、膽、女子胞此六者，地氣之所生也。皆臟於陰而象於地，故藏而不瀉，名曰奇恒之府。夫胃、大腸、小腸、三焦、膀胱此五者天氣之所生也，其氣象天，故瀉而不藏。
- The **brain**, **marrow**, bone, **vessels**, **gallbladder**, and uterus of the females: these six are **generated by earth qi**. All of them *store-in yin* and their **image is in the earth**. Thus, they store and *do not drain*. They are called the extraordinary organs.
- Now, the stomach, large intestine, small intestine, triple burner, and urinary bladder: these five are **generated by heaven qi**. Their qi is the image of heaven. Thus, they drain and do not store.

The characteristics of the extraordinary fu-organs

- The extraordinary fu-organs are characterized by hollowness, similar to the six fu-organs in morphology, and storage of essence, similar to the five zang-organs in function.
- That is why this group of tissues and organs are called the extraordinary fu-organs, including the brain, the marrow, the bones, the vessels, the gallbladder and the uterus.

Special GB

- Among the extraordinary fu-organs, the gallbladder is a **special one**.
- It is hollow inside and excretes bile to promote digestion, similar to the functions of the six fu-organs, but it also stores bile which is part of the essence, similar to the functions of the five zang-organs.
- That is why the gallbladder belongs both to the six fu-organs and the extraordinary fu-organs.

Marrow

Marrow

- Marrow is controlled and produced by the Kidneys, and equivalent to the brain and spinal cord.
- Marrow includes Brain marrow, Spinal marrow, and Bone marrow
- **Marrow nourishes the Brain and Spinal Cord through the Jing**

Nei Jing

- Nei Jing "If the **Sea of Marrow is abundant**, vitality is good, the body feels light and agile, and the span of life will be long.
- If it is deficient there will be dizziness, tinnitus, blurred vision, fatigue, and a great desire to lie down"
- If the Marrow is deficient: Brain and Spinal cord are not adequately nourished and become deficient

Sea of Marrow

Brain (Sea of Marrow)

Controlled by the **Kidney**

- Controls intelligence, memory, and the **five senses**

Related to **Heart**

- **Heart Blood** nourishes the **Shen** and mental activity

Related to **Liver**

- Controls circulation of Qi
- Helps smooth flow of emotions

1. The center of the activities

- The brain plays a very important role in life activities.
- It governs the five zang-organs and six fu-organs and regulates life activities. Impairment of the brain will threaten life.
- That is why it is said in Huangdi Neijing that "stabbing the brain will cause immediate death. "

2. Governing the mental activities

- The brain is an organ responsible for cognition and thinking.
- All the mental activities result from the reflection of things in the objective world.
- Though zangxiang theory attributes the mental activities to the heart, it never neglects the role of the brain.
- For example, it is said in Huangdi Neijing that "the head is the place where mental activities take place".

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- Li Shizhen, a great doctor in the Ming Dynasty, pointed out that "the brain is the place where the primordial spirit is kept".
 - When the brain is normal in function, people will be full of vigor, clear in thinking, fluent in speaking and strong in memory.
 - If the brain is abnormal in function, it will lead to dispiritedness, retard thinking, dizziness, poor memory or mental disorder.

3. Governing sensation and motion

- There are various sensory organs in the body, such as the **eyes**, ears, **nose**, **tongue** and **skin** that respectively receive sound, light and flavor as well as the stimulation of pain, cold and heat.
- The brain receives such stimulation through the meridians.
- The brain also governs the limbs.
- The brain transmits the order to move through the meridians to the limbs.
- The brain also constantly regulates the movement of the limbs.
- That is why the movement of the limbs is rhythmical and accurate.

Bone

Bone

- Controlled by the Kidney, and any bone problem is treated through Kidneys
- Stores bone marrow ("Simple Questions," chapter 17, "**The bones are the residence of Marrow.**")
- The Chinese concept of "Marrow" should not be confused with bone marrow as defined by Western Medicine. In TCM, the function of Marrow is to nourish the Brain and spinal cord and to form Bone-Marrow.
- ***Bone Marrow produces Bone; it was **not recognized that bone marrow produces blood as in Western thinking.*****
- If Jing and Marrow are deficient, the Bones lose nourishment, cannot sustain the body and there will be inability to walk or stand.

Uterus

Uterus (子宮, Baby Palace)

- Controlled by the **Kidney, especially the Jing**
- Controls reproduction and menstruation
- Needs a rich supply of Qi, Blood, and essence for good function
- Related to the **Liver**, especially **Liver Blood**

1. Essence stored in the kidney

- When **essence, yin and yang stored** in the kidney develop to a certain level, **Tian Gui (reproductive substance)** occurs.
- Tian Gui can promote the development and maturation of the genitals, including the uterus.
- When the uterus becomes matured, it is ready to produce menses and conceive fetus.
- When a woman becomes old, essence, yin and yang stored in the kidney are gradually reduced, and so is Tian Gui .
- Eventually menstruation stops and the uterus can no longer conceive fetus.

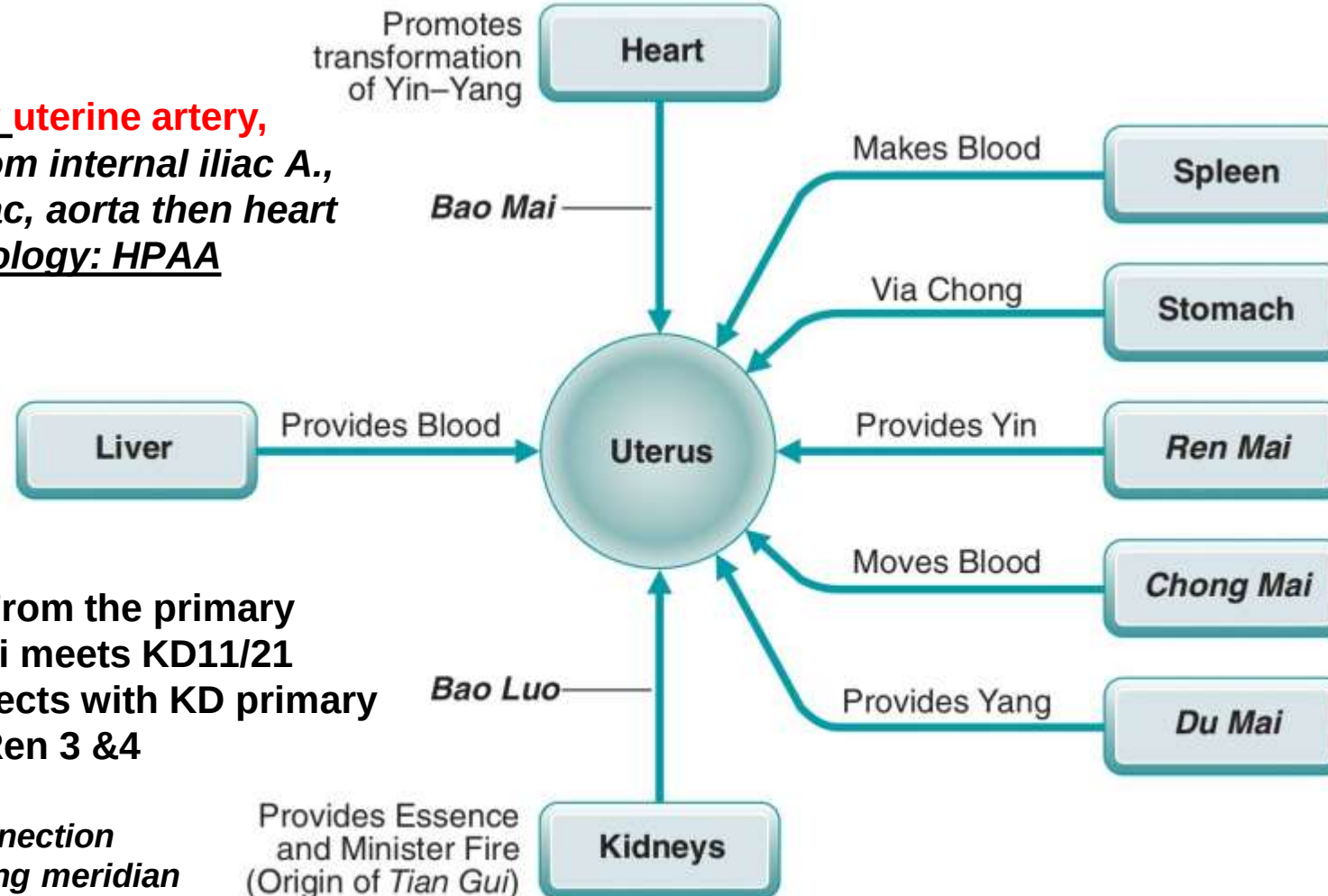
2. The function of liver-qi and liver-blood

- The liver plays a very important role in the physiological functions of the uterus.
- On the one hand, the liver governs dredging and dispersing activities and regulates the movement of qi.
- With the assistance of the liver, the uterus functions normally, producing menses and conceiving fetus.
- On the other hand, the liver stores blood and regulates the volume of blood. Such a function of the liver is closely related to the quantity of menses and nourishment of the fetus.

3. The functions of the Chong Mai and Ren Mai

- The Chong Mai and Ren Mai start from the uterus. The **Chong Mai is the sea of blood** and regulates qi and blood in the twelve regular meridians.
- The **Ren Mai the uterus and pregnancy**.
- If these two vessels function well, blood will be transported smoothly into the uterus to ensure regular menses and conception of fetus.
- The functions of these two vessels are assisted and regulated by the kidney and the liver.

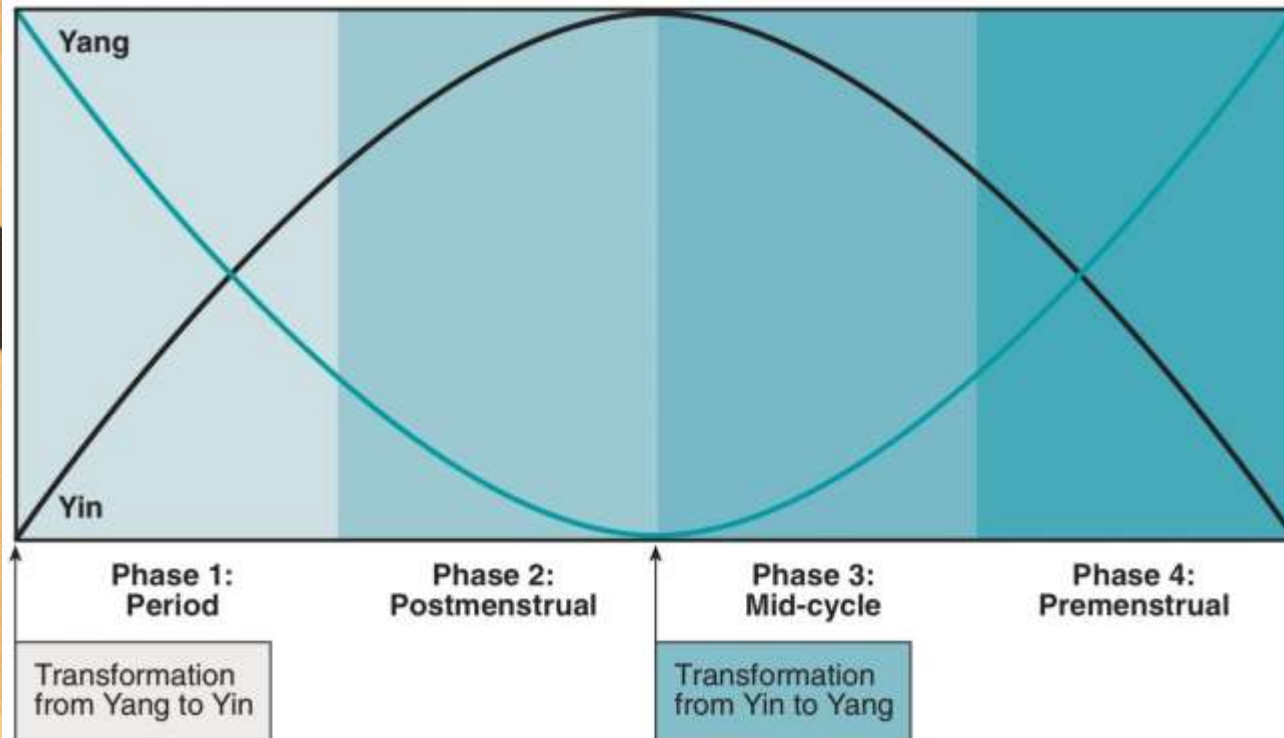
Anatomy: uterine artery,
branches from internal iliac A.,
common iliac, aorta then heart
Physiology: HPAA



- 1- Deep br. From the primary
- 2- Chong Mai meets KD11/21
- 3- Ren Mai intersects with KD primary at Ren 3 &4

N.B.: Luo means connection
and not luo connecting meridian

Figure 19.5 Relationship between the Uterus and Internal Organs



Phase 1: bleeding phase. During this phase, Blood is moving. For bleeding to start at the right time and with the right amount, it is essential for Liver-Qi and Liver-Blood to move smoothly and for Heart-Qi and Heart-Blood to descend towards the Uterus

Phase 2: postmenstrual phase. During this phase, Blood and Yin are *relatively* empty (i.e. not empty in absolute terms but only in relation to other phases), and Yin is beginning to grow. This represents the beginning of the follicular phase leading to ovulation

Phase 3: intermenstrual phase. During this phase, Yin reaches its maximum with ovulation and therefore starts to decrease after that; on the other hand, Yang starts to grow and this produces the heat necessary for ovulation

Phase 4: premenstrual phase. During this phase, Yang grows and reaches its maximum and Qi moves

Deficiency(xu 虛)

When Liver Blood is deficient

- Menstrual problems
- Sterility

Kidney Xu and Jing deficient

- Sexual and reproductive disorders related to Conception Vessel
- **Pregnancy channel**
- Must be free of obstruction in order for pregnancy to occur

Related to Chong channel

- The Sea of Blood must be abundant for fertility

Both the Chong Mai and Ren Mai originate in the Uterus

The Uterus is supported by the Heart and Spleen because of their production and circulation of Blood

Vessels

Vessels

Controlled by the Heart

- Heart controls movement of Blood through the Vessels

The Blood Vessels are considered an extraordinary organ because they contain blood. They can also be traced back to the Kidneys because the Kidneys produce bone-marrow and the bone-marrow contribute to the making of blood. Yuan Qi from the Kidneys also contributes to the transformation of Food (Gu) Qi into blood.

Gall Bladder

Gallbladder

Extraordinary because the GB **does not receive food and water** like other Fu organs and **does not communicate with the exterior**

- Stores Bile
- A pure refined substance