

A Discussion on the Pulse Diagnosis System in *Huangdi Neijing* Based on *Cang Gong' s Medical Records*

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Abstract

[Objective] Based on the historical materials on pulse diagnosis in Canggong's Medical Records, this study systematically examines the complete pulse diagnosis system of the Huangdi Neijing. [Methods] Taking the pulse diagnoses recorded in Canggong's Medical Records as a reference and following the original text of the Neijing, the two major systems of the yin-yang pulse method and the five-zang pulse method were classified and reviewed; subdivided diagnostic methods, including inspection of the cubit skin, the three regions and nine indicators, and the renying and qikou pulse methods, were analyzed layer by layer. [Results] Canggong's Medical Records can mutually corroborate the diagnostic theories recorded in the Neijing. Pulse diagnosis in the Neijing is divided into two main branches: the yin-yang pulse method and the five-zang pulse method. The former includes inspection of the cubit skin, the three regions and nine indicators, and the renying and qikou pulse methods, while the latter gradually developed and was perfected from the four-season pulse method. [Limitations] This paper conducts a theoretical review based only on transmitted ancient texts and does not further discuss clinical cases. The pulse methods of the Neijing lack unified quantitative criteria for judgment, and discrepancies in textual understanding exist between ancient and modern descriptions of pulse manifestations. [Conclusion] The Neijing contains two pulse diagnosis systems: the yin-yang pulse method and the five-zang pulse method. Canggong's Medical Records can serve as evidence that this pulse diagnosis system had already been widely applied in clinical practice during the Han dynasty.

Full Text

A Discussion on the Pulse Diagnosis System in *Huangdi Neijing* Based on *Cang Gong's Medical Records*

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Abstract:

[Objective] Based on the historical materials on pulse diagnosis in *Cang Gong's Medical Records*, this paper systematically organizes the complete pulse diagnosis system of the *Huangdi Neijing*.

[Methods] Taking the pulse diagnosis recorded in *Cang Gong's Medical Records* as a reference, and following the original text of the *Neijing*, this paper classifies and organizes the two major systems of Yin-Yang pulse methods and Five-Zang pulse methods; it analyzes, level by level, such subdivided diagnostic methods as cubit-skin diagnosis, Three Positions and Nine Indicators, and Renying-Qikou pulse diagnosis.

[Results] *Cang Gong's Medical Records* can corroborate the diagnostic theories recorded in the *Neijing*. Pulse diagnosis in the *Neijing* is divided into two principal branches: Yin-Yang pulse methods and Five-Zang pulse methods. The former includes cubit-skin diagnosis, Three Positions and Nine Indicators, and Renying-Qikou pulse methods; the latter was further developed and perfected from the Four-Season pulse method.

[Limitations] This paper conducts theoretical organization only on the basis of transmitted ancient texts, without further discussion in combination with clinical cases. The pulse methods of the *Neijing* lack unified quantitative criteria for judgment, and ancient and modern descriptions of pulse images are subject to deviations in textual understanding.

[Conclusion] In the *Neijing*, there are two sets of pulse diagnosis systems: the Yin-Yang pulse method and the Five-Zang pulse method. *Cang Gong's Medical Records* can demonstrate that this pulse diagnosis system had already been widely applied in clinical practice in the Han dynasty.

Keywords: *Cang Gong's Medical Records*; *Ling Shu*; *Su Wen*; pulse studies

Classification No.: R22

A Discussion on the Pulse Diagnosis System in *Huangdi Neijing*

Based on *Cang Gong's Medical Records*

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Abstract

[Objective] Based on pulse diagnostic historical materials in *Cang Gong's Medical Records*, this paper systematically sorts out the complete pulse diagnosis system in *Huangdi Neijing*.

[Methods] With the pulse diagnosis documented in *Cang Gong's Medical Records* as reference, this paper sorts out two major systems, namely Yin-Yang pulse methods and Five Zang pulse methods, in line with the original text of *Neijing*. Subdivided diagnostic approaches including cubit skin diagnosis, Three-Positions and Nine-Indices diagnosis, and Renying-Qikou pulse diagnosis are analyzed layer by layer.

[Results] *Cang Gong's Medical Records* can mutually corroborate the diagnostic theories recorded in *Huangdi Neijing*. Pulse diagnostics in *Neijing* are divided into two main branches: Yin-Yang pulse methods, which include cubit skin diagnosis,

Three-Positions and Nine-Indices diagnosis, Renying-Qikou pulse diagnosis and

so on; Five Zang pulse methods, which were gradually developed and perfected from Four-Season pulse methods.

[Limitations] This paper only sorts out theories on the basis of handed-down ancient medical texts without further discussion combined with clinical cases. No unified quantitative judgment criteria are available for the pulse methods in *Huangdi Neijing*, and textual comprehension biases exist between ancient and modern descriptions of pulse manifestations.

[Conclusion] Two sets of pulse diagnosis systems, Yin-Yang pulse methods and Five Zang pulse methods, are contained in *Huangdi Neijing*. *Cang Gong's Medical Records* proves that such pulse diagnosis systems had been widely adopted in clinical practice in the Han Dynasty.

Keywords: Cang Gong's Medical Records; Lingshu; Suwen; Pulse Study

Cang Gong, namely Chunyu Yi, was a famous physician of the Western Han period. The deeds of his life and records of his medical practice are found in *Records of the Historian: Biographies of Bian Que and Cang Gong*. In the *Records of the Historian*, Sima Qian wrote biographies for only two physicians: one was Bian Que, and the other was Cang Gong. That he could be placed alongside Bian Que reflects the high esteem in which Cang Gong's medical skill was held at the time.

Yet, unlike the accounts of Bian Que, which are comparatively mythic in tone, the records concerning Cang Gong in *Records of the Historian: Biographies of Bian Que and Cang Gong* are more concrete and detailed. There may be two reasons for this. First, Sima Qian and Cang Gong lived in periods close to one another. Second, at that time Cang Gong had been convicted and imprisoned, was interrogated, and a record was made; what was transmitted, therefore, was a contemporaneous record of Cang Gong's own statements. Thus we can see detailed records therein regarding medical cases and therapeutic thinking. The *Records of the Historian* contains 25 of Cang Gong's medical cases, which later generations edited into a book entitled *Cang Gong's Diagnostic Records*. This is also the earliest extant collection of medical cases in China with a complete written record.

The *Huangdi Neijing* records a large body of traditional Chinese medical theory, but the actual therapeutic practice of physicians at that time is rarely seen in the classical texts. Cang Gong's era was not far removed from the time when the *Neijing* was compiled. From Cang Gong's treatments, we can also glimpse how famous physicians of the *Neijing* era conducted clinical diagnosis, providing valuable materials for studying how the theories of the *Neijing* were applied clinically. Therefore, this article, in conjunction with *Cang Gong's Diagnostic Records*, offers a brief discussion of the diagnostic methods in the *Huangdi Neijing*.

1 Cang Gong' s Path of Medical Study

Records of the Historian: Biographies of Bian Que and Cang Gong [1] records:

“When Yi was young, he loved medicine, but of the physicians and prescriptions he tried, many proved ineffective. In the eighth year after Empress Gao, he met his teacher, Gongcheng Yangqing, at Linzi. Yangqing was over seventy years old, and Yi was able to attend upon him. He said to Yi: ‘Throw away the medical formulas you possess; they are not correct. I have medical writings on the pulses transmitted from the ancient sages, the Yellow Emperor and Bian Que; on five-color diagnosis of disease; on knowing a person’ s life and death; on resolving suspicions and determining what can be cured; as well as treatises on medicinals. They are extremely refined. My family is wealthy; I am fond of you, and I wish to take all my forbidden prescriptions and books and pass them on to you.’ Yi then said: ‘How fortunate! This is more than I dared hope for.’ Yi then avoided the mat and bowed again, receiving his pulse texts, the *Upper and Lower Classics*, the *Five-Color Diagnosis*, techniques for extraordinary cough, methods of palpation, yin-yang, external transformations, treatises on medicinals, writings on stone spirits, and forbidden books on palpating yin-yang; he read and studied them, verifying them. After one year, he understood them; he had gained some experience, though he was not yet fully refined. After three years of this, he was then able to treat people, diagnose disease, decide life and death, and he had experience and was highly competent. Now Yangqing has been dead for ten years; Yi studied under him for three full years, and Yi is now thirty-nine years old.”

From the original text of the *Records of the Historian*, we can see that Cang Gong’s path of “receiving the art” was roughly as follows: Chunyu Yi had aspired to medicine from his youth, but his clinical practice was not very effective. Later, he encountered a physician named Gongcheng Yangqing, and this teacher transmitted to Chunyu Yi texts including the *Pulse Book*, the *Upper and Lower Classics*, the *Five-Color Diagnosis*, the *Extraordinary*

Cough Technique (many later scholars believe this should be *Qiheng Technique*, with “cough” being an error for “heng”), *Kuai Du*, *Yin and Yang*, *External Transformations*, *Discourse on Medicinals*, *Shi Shen*, *The Prohibited Book on Pressing Yin and Yang*, and a series of other precious texts. These books contained a complete medical system for diagnosing diseases and treating them. After Chunyu Yi had studied by this method for one year, his treatment of patients had already begun to show considerable efficacy. After three years, his level in treating illness was already very high, and his judgments of life and death were extremely accurate. From Cang Gong’ s course of study, we can also see the importance of a clear and correct direction in learning.

2 Interpretation of Two of Cang Gong' s Medical Cases

2.1 The Case of Qi Yushi' s Headache

The original text of the *Biographies of Bian Que and Cang Gong* in the *Records of the Grand Historian* states:

“Qi Yushi Cheng himself said that he was ill with a headache. [Chunyu] Yi examined his pulse and told him: ‘Your illness is severe and cannot be spoken of.’ He then left, and privately told Cheng’ s younger brother Chang: ‘This illness is a jaundice disorder; it has arisen internally between the intestines and stomach. In five days he will develop a carbuncle, and in eight days he will vomit pus and die.’ Cheng contracted this illness from drinking wine and then having intercourse. Cheng died exactly when predicted.

The reason I knew Cheng’ s illness was that I, Yi, closely examined his pulse and obtained liver qi. The liver qi was turbid yet still; this is an illness of the inner gates. The pulse method says: ‘When the pulse is long and stringlike, and cannot correspond to the four seasons, the illness mainly lies in the liver. If it is harmonious, then the channel is the master of the illness; if it corresponds, then the collateral pulse has an excess.’ If the channel is the master of an illness and is harmonious, the illness is located within the sinews and marrow. If its correspondence is absent and the pulse is yellow, the illness is from wine and intercourse. Therefore I knew that in five days he would develop a carbuncle, and in eight days he would vomit pus and die: when I examined his pulse, the first correspondence was lesser yang. ‘Correspondence’ means that a channel disease has passed beyond the person; the person then passes beyond the collateral-pulse master illness. At that time, the first pass of lesser yang was at one fen; therefore the central heat was present but the pus had not yet formed. When it reached five fen, it arrived at the boundary of lesser yang; when it reached eight days, he would vomit pus and die. Thus, when it rises to three fen the pus forms; when it reaches the boundary there is carbuncle, and when it is completely discharged he dies. When heat ascends, it fumes the yang brightness, and the channels and collaterals blaze; when the channels and collaterals move, the pulse-knot forms; when the pulse-knot forms, the blaze is relieved—therefore the collaterals intersect. The hot qi had already ascended and moved up to the head; therefore there was headache.”

The following is an interpretation of the original text:

A Qi official named “Cheng” had a headache. After Chunyu Yi examined him, he said to the patient’ s younger brother:

“Although this illness manifests externally as headache, its root is in a carbuncle between the intestines and stomach. After five days, pus and swelling will

develop; after eight days, he will vomit pus and die. The cause of the illness is that after drinking wine he had intercourse.” Later changes in Yushi Cheng’ s condition indeed accorded with Cang Gong’ s prediction.

The reason Cang Gong was able to identify the cause of the illness accurately lay in accurate pulse diagnosis. The patient presented with a “liver pulse,” characterized as “turbid yet still.” Once this kind of “liver pulse” appears, it is called an “illness of the inner gates.” Once a person is in a state of “gate obstruction,” it is basically a fatal condition.

In his discussion, Cang Gong cited a book called *Pulse Method*. In fact, in *Cang Gong’ s Diagnostic Writings*, medical cases frequently quote this book, *Pulse Method*. Although we currently have no way to know the contents of this book, we can glimpse part of the contents of *Pulse Method* from *Cang Gong’ s Diagnostic Writings*, which is extremely important for our study of pulse methods.

The patient’ s pulse was “long and stringlike.” A long, stringlike pulse usually represents a “liver pulse.” If a patient is in a “liver pulse” state and, moreover, it cannot change along with the alternation of the seasons, this indicates that there is a problem with the “liver.” If this liver pulse is relatively soft, it represents disease of the liver channel. If it is accompanied by a kind of “corresponding pulse,” it indicates that there is a problem in the liver collateral.

The *Plain Questions: Discourse on the Three Sections and Nine Indicators* [2] once states: “When the pulse corresponds yet is hooked, the illness lies in the collateral pulse.” The patient’ s pulse “corresponded yet was yellow” ; the pulse “yellow” is equivalent to a surging pulse, similar to “corresponding yet hooked.” Through “the pulse corresponding yet being hooked,” it could be determined that the cause of the illness was “drinking wine and intercourse.”

The reason Cang Gong knew that “in five days he would develop a carbuncle, and in eight days he would vomit pus and die” was that within the pulse image there was a “first correspondence of lesser yang.” Here Cang Gong again used another yin-yang pulse method. The former was a five-viscera pulse method; the latter was a yin-yang pulse method. At this time he judged that it was a problem of the lesser-yang collateral pulse.

At that time, when Cang Gong diagnosed Yushi Cheng’ s illness, it had only reached the *neiguan* stage by one degree of shaoyang disease. At *neiguan* by one degree, it was merely internal heat and no swelling had yet developed. When it reached *neiguan* by five degrees, it had reached the boundary of shaoyang; after another eight days, he would vomit pus and die. Therefore, swelling began when it reached *neiguan* by two degrees; when it reached *neiguan* by five degrees, the shaoyang boundary had been reached and the swelling had matured. Thus, by the eighth day the swelling would rupture, discharge pus, and he would die. “When heat rises upward, the smoke causes yang brightness; it scorches the channels, and when the channels move, pulse binding develops; when pulse binding develops, the scorching is relieved, and therefore the channels intersect.

Heat qi has already ascended, reaching the head and stirring there; therefore there is headache.” Thus, this passage explains that the headache was not a disease located in the head, but a headache caused by a painful lesion in the stomach and intestines, whose heat moved upward against the channels and vessels.

Why, then, does shaoyang disease produce painful lesions in the intestines and stomach? Let us look at the *Suwen: Discussion of Jue*: “When shaoyang reverses, the joints are unfavorable. When the joints are unfavorable, the waist cannot move, the neck cannot turn, intestinal abscess develops and cannot be treated; if there is fright, the patient dies.” Once intestinal abscess appears in shaoyang disease, it is a sign of death. Therefore, we cannot simply understand shaoyang as “bitter taste in the mouth, dry throat, and dizziness.” We must also consult the contents of the *Neijing*, especially certain theories concerning the channels and vessels.

Let us review this medical case. Originally, Yushi Cheng had a headache, and Cang Gong accurately judged through pulse diagnosis that the cause of the disease was drinking alcohol and internal injury. The disease site was the intestines and stomach, and the disease nature was a painful lesion. Its prognosis was swelling on the fifth day thereafter and death from vomiting pus on the eighth day thereafter. All of this was obtained through pulse diagnosis, and it had very strong pulse-diagnostic grounds. Cang Gong possessed a complete system of pulse diagnosis.

2.2 Case of the Queen Mother of Qi Having Difficulty with Defecation and Urination

The original text of *Records of the Historian: Biographies of Bian Que and Cang Gong* records: “The Queen Mother of Qi fell ill. Zhao Chunyu examined her pulse and said: ‘Wind *dan* is lodged in the bladder, causing difficulty in defecation and urination, and dribbling reddish urine.’ Chunyu had her drink a decoction of *huoqi*; after one dose, defecation and urination were normal, and after another dose the illness was cured, just as in the past. The disease had been contracted when she was sweating profusely and took off her outer garment while perspiring. Therefore it was known that the illness of the Queen Mother of Qi was because Chunyu examined her pulse, cut at the opening of her greater yang, and found it to be a manifest wind qi. The pulse method says: ‘When it sinks and is greatly firm, and when it floats and is greatly tight, the disease is chiefly in the kidney.’ Cutting the kidney and finding the opposite of this, the pulse was large and agitated. The large quality is bladder qi; the agitation means that there is heat within and dribbling reddish urine.”

In this case, the Queen Mother of Qi fell ill, and Zhao Chunyu was summoned to see and diagnose her. After feeling the pulse, Chunyu judged that “wind *dan*” was lodged in the bladder, thereby causing difficulty in defecation and urination, and further producing the condition of hematuria. Chunyu treated

her with “huoqi decoction”; after she drank it, defecation and urination became unobstructed. The cause of her illness was that, after sweating profusely, she had removed her outer garment and been struck by yin wind. From this point, it can be seen that she may have suffered an invasion by a wind-damp pathogen.

The reason he knew the cause of her illness was that her *cunkou* pulse manifested wind-damp (from this it can be seen that in Chunyu Yi’s time there was already a pulse method of taking the *cunkou* alone). In the *Pulse Method*, it says that when the floating pulse is large and tight, and one presses down on it, it is large and firm. This pulse indicates that the disease is in the kidney; this, again, is a five-viscera pulse method. Chunyuui palpated a kidney pulse, but this kidney pulse was different from an ordinary one. The *Nanjing* states: “When it is frequent, it is in the lung; when it is slow, it is in the spleen.” The *Treatise on Cold Damage* says: “A slippery and frequent pulse is in the lung; a slow and sunken pulse is in the spleen.” Here Cang Gong palpated a pulse that was large and agitated; this should be a disease in the bladder. Agitation represents a heat sign, and therefore it led to blood in the bladder urine.

Reviewing the medical case, through pulse diagnosis Cang Gong judged that the cause of the Queen Mother of Qi’s illness was that, after sweating, she had been affected by a wind-damp pathogen. This externally contracted wind-dampness continued to transform, ultimately reaching the bladder as the disease site; the nature of the disease was a bladder heat disorder, thereby producing her symptoms.

3 Insights Brought by Cang Gong’s Medical Cases

3.1 Characteristics of Cang Gong’s Pulse Method

First, through pulse diagnosis, one can accurately determine the cause, location, and nature of a disease. Second, Cang Gong possessed extremely rich medical knowledge and understanding of disease. By combining this with pulse theory, he linked pulse theory with the causes and mechanisms of disease, judged the development, prognosis, and recovery of a disease, and ultimately reached the level of “deciding life and death.”

Third, pulse methods in the Han dynasty were extremely refined, to a degree that may far exceed what we imagine. Fourth, Cang Gong not only used the five-viscera pulse method and the pulse method of taking the “inch opening” alone to determine the cause of disease, but also used the yin-yang pulse method. Each individual pulse method had its own diagnostic blind spots; therefore, mastering multiple pulse methods and integrating them thoroughly was a necessary condition for becoming an excellent physician.

3.2 Cang Gong' s Academic System

The “Cang Gong Question-and-Answer” in the *Records of the Historian* records how Cang Gong taught medicine, and from this one can see what aspects his medical system encompassed.

The original text reads as follows: “The questioning official, Yi, said: ‘When the officials and commoners had matters on which they wished to learn methods from Yi, did they all fully obtain Yi’ s methods or not? What commandery or village were they from?’ He replied: ‘Song Yi of Linzi studied with me, and I taught him the five-color examination; he was in his late twenties. Gao Qi and Wang Yu, the grand physicians dispatched by the King of Jibei, studied, and I taught them the upper and lower channels and the unusual network-connections, how to discuss what the shu-points belong to, and how qi properly moves upward and downward, enters and exits, follows or goes against its course, as well as how to use whetstone needles and determine cauterization sites; they were in their late twenties. Ma Chang and Feng Xinzhenfeng, dispatched by the King of Zichuan, studied, and I taught them the method of cases, how to follow and counter disease, the methods of discussing medicinals, determining the five flavors, and harmonizing decoctions. Du Xin of the family of Gao Yonghou liked pulses and came to study, and I taught him the upper and lower channels and the five-color examination; he was in his early thirties. Tang An of Linzi was summoned by imperial order to come and study, and I taught him the five-color examination, the upper and lower channels, unusual cough, the four seasons’ corresponding yin-yang weights, and what is not yet formed, in order to remove him from service as the King of Qi’ s attendant physician.’”

People at court asked Cang Gong: “Are there officials and commoners who have studied with you? How did they all study? Where were they from?” Cang Gong’ s answer was as follows: “Song Yi of Linzi—I taught him the knowledge of the five examinations; he studied for one year. Gao Qi and Wang Yu, the grand physicians dispatched by the King of Jibei, came to study; I taught them knowledge of the channels and network vessels, including the regular channels and network vessels, what the acupoints belong to, and how to determine the disease location where the struggle between the pathogenic and the normal occurs; then I taught them to use sharp stones, bian-stones, or moxibustion for treatment; they studied for about one year. Ma Chang and Feng Xin of the Grand Granary Office, dispatched by the King of Zichuan, came to study the methods; Cang Gong taught them how to write prescriptions, use medicinals, and prepare formulas. Thus at this time Cang Gong not only had to master knowledge of the channels and network vessels, but also had to master knowledge of prescribing medicinals. Du Xin, a retainer of the family of Gao Yonghou, liked studying pulse diagnosis; I taught him the upper and lower channels and the five examinations; he studied for two years. Tang An of Linzi came to study; I taught him the five examinations, the upper and lower channels, unusual constancies, the four seasons’ corresponding yin-yang weights, and related knowledge of these matters. This encompassed much knowledge about diagnosing and treating

disease and pulse methods.”

From this we can see that Cang Gong’ s medical system was very complete: first, anatomy and physiology, including a well-developed system of channels and network vessels, the locations of the shu-points, the circulation of qi and blood, the theoretical system of the four seasons’ yin and yang under the view of correspondence between heaven and human beings, and the theory of the visceral manifestations. Second, a pathological system, including knowledge of the meeting of the normal and pathogenic as they move with or against the proper course, enter and exit, and so on; from the many medical cases it can be seen that Cang Gong had an excellent grasp of the development, transformation, and prognosis of many diseases. Third, diagnostic methods, including a series of very complete diagnostic methods such as the five-color inspection diagnosis, five-viscera pulse diagnosis, and yin-yang pulse diagnosis. Fourth, therapeutic methods, including methods of decoctions and fluids, bian-stone therapy, whet-stone therapy, and moxibustion; however, there is no mention of Cang Gong applying acupuncture.

4 Ancient Medical Classic Titles Mentioned in *Cang Gong’ s Medical Records* and Their Relationship to the *Inner Canon*

4.1 Titles of Ancient Medical Texts in *Cang Gong’ s Medical Records* and the *Inner Canon*

In *Cang Gong’ s Medical Records*, the ancient medical classics that Cang Gong is mentioned as having studied include many works, such as “*Pulse Book*,” “*Upper and Lower Channels*,” “*Five-Color Diagnosis*,” “*Techniques of Unusual Cough*,” “*Measurement*,” “*Yin and Yang*,” “*External Transformations*,” “*Discussion of Medicinals*,” “*Stone Spirit*,” and “*Book on Avoiding Yin- Yang Contraindications*.” Although these medical texts are no longer extant, many medical books with the same titles are also found in the records of the *Inner Canon*.

For example, *Suwen: Discussion on Passing Through the Five Excesses*: “In treating disease by the sage, one must know heaven and earth, yin and yang, the regularities of the four seasons, the five viscera and six bowels, the exterior and interior of females and males, acupuncture, cauterization, bian-stones, and the principles governing poisons and medicinals; one must follow human affairs so as to clarify the Way of the channels, distinguish nobility and baseness, poverty and wealth, the various differences in conduct and principle, ask about youth and age, courage and timidity, examine the divisions, know the origin and beginning of disease, the eight rectifications and nine indicators—diagnosis must be subsidiary to these. If in diagnosing disease one does not examine these, this is called losing the constant. Carefully observing this treatment makes it mutually illuminate with the classics—the *Upper Classic*, *Lower Classic*, *Measurement*, *Yin* ...”

Yang, Qi Heng, and Wu Zhong, “*deciding by means of the bright hall, examining*

beginning and end; [these methods] may be practiced broadly.” In this passage, the names of medical texts such as Shang Jing, Xia Jing, Kui Du, Yin Yang, Qi Heng, and Wu Zhong* are also mentioned.

The *Suwen • Treatise on the Possibility of Disease* states: “The *Shang Jing* speaks of the communication of qi with Heaven. The *Xia Jing* speaks of the transformations of disease. The *Jin Gui* determines life and death. The *Kui Du* concerns cutting and measuring. The *Qi Heng* speaks of extraordinary diseases. What is called ‘extraordinary’ means causing extraordinary diseases not to result in death within the four seasons; what is called ‘constant’ means that [disease] can result in death within the four seasons. What is called *kui* means to seek it by cutting; that is, to seek and examine the principles of the pulse. What is called ‘measuring’ means obtaining the site of the disease and measuring it by the four seasons.” According to this passage from the original text of the *Inner Canon*, the *Shang Jing* discusses anatomy, physiology, and the correspondence between Heaven and human beings; the *Xia Jing* discusses the causes and mechanisms of disease; the *Jin Gui* and *Kui Du* record diagnostic methods; and the *Qi Heng* is concerned with the study of disease.

4.2 The Academic System of the *Inner Canon* Indicated by the Names of Ancient Medical Texts

Combining the names of the ancient medical texts described above, we can see that the medical system of that time contained extremely rich content and covered a very broad range. This is also mentioned in other chapters of the *Inner Canon*.

The *Suwen • Great Treatise on the Correspondences and Manifestations of Yin and Yang* says: “The Yellow Emperor said: I have heard that the ancient sages discussed and ordered human form, differentiated the zang and fu organs, set forth the network vessels, connected the meridians and vessels at their ends, and understood the six unions, each following its own channel. The places from which the qi points issue each have their own names; the streams and valleys belong to the bones, and each has its place of origin; the divisions have mutual inverse and following relationships, each with its own order; the four seasons and yin and yang all have warp and woof; the correspondences of exterior and interior all have surface and lining.” —The ancient physicians dissected, organized, and explored the human body; differentiated the zang and fu organs; created meridian theory; used the channels and network vessels to communicate between our body and the zang-fu organs; established acupoint theory and specified in detail the locations to which the acupoints belong. The large meetings of the flesh are called valleys, the small meetings of the flesh are called streams, and the spaces between streams and valleys are where the acupoints are located; the acupoints are the places where the meridians, nutritive and defensive qi, and qi and blood circulate, intersect, and converge. The divisions mainly refer to inspection diagnosis (bright-hall inspection), while the four seasons and yin-yang mainly refer to pulse diagnosis. Through complexion diagnosis and pulse

diagnosis, the ancients achieved the diagnostic goal of inferring the interior from the exterior. Looking comprehensively at the *Inner Canon*, it was also on this basis that an entire medical theoretical system was established.

What kind of medical system, then, did the *Inner Canon* establish for us?

First, it is the anatomical entity. This includes the five entities of skin, vessels, flesh, sinews, and bones; the five zang organs; the six fu organs; the extraordinary fu organs; and the gaohuang (membrane system).

Second, it is the basic substances of life. These include essence, nutritive qi, defensive qi, blood, fluids, humors, spirit, and so on.

Third, it is a meridian physiological circulatory system, based on the meridians and the nutritive, defensive, qi, and blood, that communicates between the interior and exterior.

Fourth, it is an acupoint system established on the basis of the meridian system.

Fifth, it is a yin-yang theoretical system established on the basis of the four seasons and yin-yang, used to explain life phenomena, physiological functions, and pathological changes.

Sixth, it is a zangxiang theoretical system established on the basis of the four seasons and five phases, used to explain life phenomena, physiological functions, and pathological changes.

In addition, theories of constitution, systems for disease diagnosis, and systems for disease treatment were also established on this foundation. Therefore, the pulse methods of the *Inner Canon* likewise developed into two major categories: yin-yang pulse methods and five-phase pulse methods.

5 Views on Etiology and Pathogenesis in the *Inner Canon*

5.1 Classification of Etiologies

The *Lingshu • Oral Questions* [3] says: “The beginnings of the hundred diseases all arise from wind, rain, cold, summerheat, yin-yang, joy and anger, food and drink, dwelling places, great fright and sudden fear.” The *Lingshu • The Beginnings of the Hundred Diseases* says: “The beginnings of the hundred diseases all arise from wind, rain, cold, summerheat, clear and damp, joy and anger. If joy and anger are not regulated, they injure the zang organs; wind and rain injure the upper part; clear and damp injure the lower part.” The *Suwen • Great Treatise on the Correspondences and Manifestations of Yin and Yang* says: “Thus the evil qi of Heaven, when it affects a person, harms the five zang organs; the cold and heat of water and grain, when they affect a person, harm the six fu organs; the damp qi of Earth, when it affects a person, harms the skin, flesh, sinews, and vessels.”

Combining the above original passages with other chapters of the *Neijing*, we can see that the *Neijing* divides causes of disease into the following categories: external contraction of the six excesses, mental and emotional states, sexual affairs, and dietary imbalance. Among these, external contraction of the six excesses mostly injures the body by being received from outside: wind and rain injure the upper part, clear dampness injures the lower part, and as illness undergoes transformation it gradually enters the interior and injures the five “zang.” Dietary imbalance directly injures the “mai.” Mental and emotional states, as well as sexual affairs, directly injure the five “zang.”

5.2 Transformation of the Causes of Disease

Although external contraction of the six excesses mostly injures the body by being received from outside, it can also enter the interior through transformation and injure the five zang. How, then, do the externally contracted six excesses gradually transform and reach our five zang?

The *Suwen • Great Treatise on the Correspondences and Manifestations of Yin and Yang* states: “Therefore, when pathogenic wind arrives, the illness is like wind and rain. Thus, those skilled in treatment treat the skin and hair first; next they treat the flesh and skin; next they treat the sinews and vessels; next they treat the six fu; and next they treat the five zang. When the five zang are treated, it is half death and half life.”

The *Suwen • Treatise on Sewing-Stab Needling* states: “When pathogen lodges in the form, it must first lodge in the skin and hair. If it remains and does not leave, it enters and lodges in the minute vessels; if it remains and does not leave, it enters and lodges in the luo-vessels; if it remains and does not leave, it enters and lodges in the channels; internally it connects with the five zang, disperses in the intestines and stomach, and yin and yang are both affected; the five zang are then injured. This pathogen enters from the skin and vessels, and reaches the five zang in sequence.”

From the original texts, it can be seen that in the *Neijing* the law governing the transformation of disease from the exterior to the interior is as follows: from the initial skin and hair (floating luo-vessels), if untreated, it transforms to the flesh and skin, the vessels, sinews, and bones (minute luo-vessels, major luo-vessels, and channels), then to the six fu, and finally to the five zang.

Therefore, we may summarize the six levels of disease location in the *Neijing* as follows: the five body constituents: skin, vessels, flesh, sinews, and bones; the channel-vessel system: floating luo-vessels (skin), minute luo-vessels, major luo-vessels, and channels; the six fu; the five zang (1. the physical entities of the five zang; 2. the five zang storing essence and spirit, governing mental and psychological activity); the gaohuang (which may be likened to a tumor that has metastasized to the peritoneum, abdominal cavity, and pleura); the four seas (the “depot” of qi, blood, fluids, and humors).

6 The Two Types of Pulse-Method Systems in the *Neijing*—the Yin-Yang Pulse Method and the Five-Zang Pulse Method

In modern medicine, only when the diagnosis is clear can one speak of treatment; if the diagnosis is unclear, treatment has no basis. The same is true in Chinese medicine: only when we have mastered diagnostic methods can we speak of treatment. The significance of diagnosis is to enable us to determine more accurately the disease location and to judge the direction in which the disease is moving, thereby guiding our treatment.

At present, the most important diagnostic methods in Chinese medicine are the four examinations: “inspection, listening and smelling, inquiry, and palpation.” In the period of the *Neijing*, greater emphasis may have been placed on inspection and pulse diagnosis. This article focuses mainly on discussion of pulse diagnosis.

Pulse diagnosis in the *Neijing* is mainly divided into two broad categories: one is the yin-yang pulse method based on channel theory (including the cubit-skin diagnostic method, the three sections and nine indicators method, the renying-cunkou pulse method, and the whole-body yin-yang pulse method); the other is the five-zang pulse method based on zang-imagery theory (“whole five-zang pulse method” and “sectional five-zang pulse method”).

In addition, ancient medical texts also contain the “sectional five-zang pulse method.” This pulse method was not mainstream during the period of the *Neijing*; it existed only in embryonic form in the *Suwen* • *Subtle Treatise on the Essentials of the Pulse*, and was not gradually perfected until the *Maijing*. From the discussions in Cang Gong’ s medical records, we can see that Cang Gong’ s medical system did not include the sectional five-zang pulse method. The mainstream “five-zang pulse method” at that time was still the “whole five-zang pulse method.”

7 The Yin-Yang Pulse-Method System

7.1 The Cubit-Skin Diagnostic Method

(1) The diagnostic significance of the cubit-skin diagnostic method.

Cubital skin diagnosis mainly assesses the state of vacuity or repletion of qi and blood in the network vessels, especially the grandchild networks. The *Plain Questions*: “*Comprehensive Discourse on Vacuity and Repletion*” says: “The Emperor said: When the network qi is insufficient and the channel qi is in excess, what is this like? Qi Bo said: When the network qi is insufficient and the channel qi is in excess, the pulse opening is hot while the cubital skin is cold; in autumn and winter this is counterflow, and in spring and summer it is

favorable. The Emperor said: When the channels are vacuous and the networks are full, what is this like? Qi Bo said: When the channels are vacuous and the networks are full, the cubital skin is hot and full, while the pulse opening is cold and rough; this is death in spring and summer and life in autumn and winter. The Emperor said: How should this be treated? Qi Bo said: When the networks are full and the channels vacuous, moxa the yin and needle the yang; when the channels are full and the networks vacuous, needle the yin and moxa the yang.”

Strictly speaking, cubital skin diagnosis is not actually a “pulse method,” because its site of palpation is the skin of the cubital region. The reason it is placed here is that its diagnostic significance is extremely important.

What, then, is its specific diagnostic significance? What the *Inner Canon* calls “the network qi is insufficient and the channel qi is in excess” means that the pulse opening is hot while the cubital skin is cold. Correspondingly, palpating the pulse represents excess or insufficiency of the channel vessels, while palpating the cubital skin represents excess or insufficiency of the network vessels. The network vessels are at the surface, while the channel vessels function as an inner main trunk.

Autumn and winter are states in which things are meant to be stored inward. If the network qi is insufficient while the channel qi is in excess, the channel qi is again being conveyed inward; thus the network qi becomes even more insufficient and the channel qi even more excessive. Therefore this is called “counterflow in autumn and winter, favorable in spring and summer.”

And what is meant by “the channels are vacuous and the networks are full”? Qi Bo said: “When the channels are vacuous and the networks are full, the cubital skin is hot and full, while the pulse opening is cold and rough; this is death in spring and summer and life in autumn and winter.” The Yellow Emperor asked: “How should this be treated?” Qi Bo said: “When the networks are replete and the channels vacuous, use moxibustion to supplement the channel vessels and acupuncture to drain the qi and blood of the network vessels. When the channels are full and the networks vacuous, use acupuncture to drain the qi and blood of the channel vessels and moxibustion to supplement the qi and blood of the network vessels.” Here the channel vessels belong to yin, and the network vessels belong to yang. Thus from this discussion it can be seen that cubital skin diagnosis chiefly judges the vacuity or repletion of qi and blood in the network vessels.

(2) Operational Essentials and Procedure of Cubital Skin Diagnosis

The *Spiritual Pivot*: “*Discussion of Diseases Diagnosed by the Cubital Skin*” says: “The Yellow Emperor asked Qi Bo: I wish to diagnose disease without looking at the complexion or taking the pulse, but only by adjusting the cubital skin, so as to speak of the disease and know the interior from the exterior. How is this possible? Qi Bo said: Examine the slowness or urgency, smallness or largeness, smoothness or roughness of the cubital skin, and the firmness or

flaccidity of the flesh, and the disease form is determined.” The *Spiritual Pivot: “Evil Guests”* says: “Hold the cubital skin and observe whether the flesh is firm or flaccid, whether it is large or small, smooth or rough, cold or warm, dry or moist.” The *Spiritual Pivot: “Disease Forms of Evil Qi in the Zang-Fu”* says: “When the pulse is urgent, the skin of the cubital region is also urgent; when the pulse is relaxed, the skin of the cubital region is also relaxed; when the pulse is small, the skin of the cubital region is also reduced and has little qi; when the pulse is large, the skin of the cubital region is also raised and yellow; when the pulse is slippery, the skin of the cubital region is also slippery; when the pulse is rough, the skin of the cubital region is also rough. Among these six changes, there is the subtle and there is the extreme. Therefore, one who is skilled at adjusting the cubital skin does not wait for the inch pulse; one who is skilled at adjusting the pulse does not wait for the complexion. All urgent pulses mostly indicate cold; relaxed pulses mostly indicate heat. Large pulses mostly indicate much qi and little blood; small pulses indicate that both blood and qi are deficient. Slippery pulses indicate exuberant yang qi with slight heat; rough pulses indicate much blood and little qi with slight cold.”

Combining the above original passages, the essentials of cubital skin diagnosis may be known as follows: Palpate six states: skin that is yellow and raised (the skin is full; the network vessels have much qi and little blood), skin that is reduced and has little qi (the skin is slack and weak; qi and blood in the network vessels are both deficient), relaxed (the skin is slack and oily; qi and blood in the network vessels are hot), urgent (the skin is tense and contracted; qi and blood in the network vessels are cold), slippery (the skin is smooth; yang qi of the network vessels is exuberant, with slight heat), and rough (the skin is coarse and rough; the network vessels have much blood and little qi, with slight cold). From these, one judges vacuity or repletion and cold or heat of qi and blood in the network vessels. Judge the vacuity or repletion of the flesh. “One who is skilled at adjusting the cubital skin does not wait for the inch pulse; one who is skilled at adjusting the pulse does not wait for the complexion” (if the disease can be resolved in the network vessels, there is no need to reach the channel vessels; if it can be resolved in the channel vessels, there is no need to wait until it reaches the zang-fu).

The operational procedure of cubital skin diagnosis is as follows: Site of operation: the skin from the styloid process of the radius to the transverse crease of the elbow. Methods of operation: palpate whether the skin is yellow and raised, reduced and lacking qi, relaxed, urgent, slippery, or rough; palpate the firmness or flaccidity of the flesh; diagnostic objective of cubital skin diagnosis: to judge vacuity or repletion and cold or heat of qi and blood in the network vessels. Corresponding qi-blood states in cubital skin diagnosis: “yellow and raised” means much qi and little blood; “reduced and lacking qi” means both blood and qi are deficient; “urgent” means much cold; “relaxed” means much heat; “slippery” means exuberant yang qi with slight heat; “rough” means much blood and little qi with slight cold.

7.2 Three-Region and Nine-Positions Diagnosis

Original text of *Suwen* • *Sanbu Jiuhou Lun*:

“What are called the three regions?” Qi Bo replied: “There is the lower region, the middle region, and the upper region. Each region has three indicators. The three indicators correspond to Heaven, Earth, and Man; one must point them out and guide by them—only then may they be taken as true. In the upper region, Heaven is the pulsation of the two corners of the forehead; in the upper region, Earth is the pulsation of the two cheeks; in the upper region, Man is the pulsation in front of the ear. In the middle region, Heaven is the hand taiyin; in the middle region, Earth is the hand yangming; in the middle region, Man is the hand shaoyin. In the lower region, Heaven is the foot jueyin; in the lower region, Earth is the foot shaoyin; in the lower region, Man is the foot taiyin. Therefore, in the lower region, Heaven is used to examine the liver, Earth to examine the kidneys, and Man to examine the qi of the spleen and stomach. The Emperor asked: “What do the indicators of the middle region examine?” Qi Bo replied: “There is also Heaven, Earth, and Man. Heaven is used to examine the lung; Earth is used to examine the qi within the chest; Man is used to examine the heart.” The Emperor asked: “What does the upper region examine?” Qi Bo replied: “There is also Heaven, Earth, and Man. Heaven is used to examine the qi at the corners of the head; Earth is used to examine the qi of the mouth and teeth; Man is used to examine the qi of the ears and eyes. The three regions each have Heaven, each have Earth, and each have Man. Three make Heaven, three make Earth, and three make Man. Three times three combined make nine; the nine are divided into nine fields, and the nine fields make nine zang.”

The Emperor asked: “How may one know where the disease is located?” Qi Bo replied: “Examine the nine indicators. If only the small one is diseased, if only the large one is diseased, if only the rapid one is diseased, if only the slow one is diseased, if only the hot one is diseased, if only the cold one is diseased, or if only the sunken one is diseased—when its pulse is hooked and substituted, the disease lies in the network vessels. The indicators of the nine pulses correspond to one another; if the upper and lower are unified, they must not lose correspondence. After one indicator appears, there is disease; after two indicators appear, the disease is severe; after three indicators appear, the disease is critical. What is meant by ‘after’ is that there should be no fear. Examine its stomach zang to know the period of death and life; one must first know the regular channels and pulses, and only afterward know the diseased pulses. When the true-zang pulse appears, there is victory and death.”

Combining the above original text, the operational essentials of the three-region nine-indicator diagnostic method may be known as follows:

(1) Operational locations

Palpate the pulse at the forehead corner to examine the qi of the head corner; palpate the pulse in front of the ear to examine the qi of the ears and eyes; palpate the pulse of the cheek to examine the qi of the mouth and teeth; palpate the cun-kou pulse behind the hand taiyin taiyuan to examine the qi of the lung; palpate the pulse at the crossing of the bones behind hegu to examine the qi within the chest; palpate the shenmen pulse of the hand shaoyin to examine the qi of the heart; palpate the pulse at the crossing of the bone behind the taichong point to examine the qi of the liver; palpate the chongyang pulse to examine the qi of the spleen and stomach; palpate the taixi pulse to examine the qi of the kidneys.

(2) Operational method

Examine what is “singular” (where the singular place harbors abnormality), that is, where one pulse differs markedly from the others and is uncoordinated with them; observe whether, at the singular place, the pulse is large, small, rapid, slow, cold, hot, or whether the pulse opening is sunken, and determine the disease qi and blood: vacuity, repletion, cold, heat; according to whether there are manifestations such as substituted-but-hooked, soft-and-harmonious, slippery-and-rapid, slow-and-slack, or true-zang, determine the disease location: in the network vessels, channels, pulses, zang, or fatal disorder.

(3) Advantages and shortcomings of this method

Advantages: localization is accurate and diagnosis is clear; it can diagnose disorders shared by multiple channels and pulses.

Shortcomings: the operation is complicated; it cannot accurately determine conditions of channels and pulses other than the nine indicators.

7.3 Renying-Cunkou Pulse Method

The renying-cunkou pulse method is of paramount importance in the *Neijing* and is repeatedly mentioned in many original passages. For example, *Lingshu* • *Jiuzhen Shier Yuan* states: “If one wishes to use the fine needle to open its channels and pulses, regulate its blood and qi, and manage the meetings of their counterflow and thuận flow, so that this may be transmitted to later generations, then one must make clear the method for doing so. Yet in the end it is still incomplete; after a long time it will not be exhausted. It is easy to use yet hard to forget. Let it become a classic; distinguish its chapters; separate its exterior and interior; make it the beginning and end; let each have its form; first establish the needle classic. I wish to hear its details.” Qi Bo answered: “Your servant asks to infer and arrange them in sequence. Now there is a guideline, beginning with one and ending with nine divisions. Please allow me to speak of its way.” *Lingshu* • *Genjie* states: “The mystery of the nine needles lies in the beginning

and end. Therefore, if one can know the beginning and end, one can encompass all in a single statement; if one does not know the beginning and end, the way of needling is exhausted.”

These two passages tell us the subtlety of the “Nine Needles.” The most important thing lies in the “Zhongshi” chapter: one must be able to understand the contents and principles of the “Zhongshi.” This can be summed up in a single sentence: without knowing the “Zhongshi,” no matter how many techniques one studies, it is still very difficult to attain a superior level of practice.

The “Lingshu · Zhongshi” chapter discusses in detail the *renying* and *qikou* pulse method. This system of *renying* and *qikou* pulse diagnosis is also systematically discussed in many other chapters of the *Neijing*, such as “Lingshu · Prohibitions on Clothing,” “Lingshu · Yin and Yang: Twenty-Five Types of Persons,” and “Suwen · Treatise on the Hidden Images of the Six Seasonal Nodes.” The term “qikou” is sometimes written as “cunkou” or “maikou,” and these terms are used interchangeably. Many chapters of the *Neijing* repeatedly mention the *renying* and *qikou* pulse method, showing that during the period of the *Neijing* it was a very important pulse method.

(1) The Importance of the *Renying-Qikou* Pulse Method

The “Lingshu · Zhongshi” states: “The Way of needling all comes to completion in the ‘Zhongshi.’ If one clearly understands the ‘Zhongshi,’ and takes the five viscera as the guiding principle, then yin and yang are determined…… Reverently following the Heavenly Way, I ask you to explain the ‘Zhongshi.’ The ‘Zhongshi’ takes the channel pulses as its guiding principle. Holding the *renying* and *maikou*, one thereby knows whether yin and yang have excess or deficiency, whether they are balanced or unbalanced; this is the whole of the Heavenly Way. What is called a balanced person is one who is not ill. In one who is not ill, the *maikou* and *renying* correspond to the four seasons; above and below they respond to one another and go back and forth together; the pulses of the six channels do not bind or stir; the fundamental cold and warmth are mutually guarded and regulated; form, flesh, blood, and qi must be commensurate—this is called a balanced person. In one with little qi, the *maikou* and *renying* are both weak and do not fill the ruler or the inch. In such a case, yin and yang are both insufficient. If yang is supplemented, then yin will be exhausted; if yin is drained, then yang will become detached. In such a case, one may administer sweet medicinals, but must not drink strong decoctions; such a case is contraindicated for moxibustion. If it is drained because of excess, then the qi of the five viscera will be damaged.”

The original text states that the principles of acupuncture come to their conclusion in the “Zhongshi” chapter. If one understands the principles expounded in the “Zhongshi,” and takes the five viscera as the framework, then one can judge the condition of yin and yang on the exterior and interior of the human body. The yin channels are governed by the viscera, the yang channels by the bowels;

the yang channels receive qi from the four extremities, while the yin channels receive qi from the five viscera. Draining is the method for counterflow; supplementation is the method for compliance. To understand supplementation and draining, one must first know the deficiency or excess condition of the human body, and then use supplementing and draining methods to regulate the balance of the body's qi, blood, yin, and yang. The *renying-qikou* pulse method judges the deficiency or excess condition of the body's yin, yang, qi, and blood by comparing the *renying* with the *qikou*, and by assessing whether they are balanced or unbalanced. If we wish to understand the pulse manifestation of a patient's disease state, we must first understand the pulse manifestation of a person in a normal state—that is, the “balanced person.” The state of such a balanced person should be that “the *maikou* and *renying* correspond to the four seasons; above and below they respond to one another and go back and forth together; the pulses of the six channels do not bind or stir; the fundamental cold and warmth are mutually guarded and regulated; form, flesh, blood, and qi must be commensurate.” If this person has very little qi and blood, the *maikou* and *renying* are both very vacuous, not even able to fill the *chi* and *cun*. In such a situation acupuncture treatment cannot be used: supplementing yang will cause yin to be exhausted, and draining yin will cause yang to perish and become detached. Nor can moxibustion be used in this case; one should supplement slowly according to deficiency, using sweet medicinals.

(2) The Operational Method of the *Renying-Qikou* Pulse Method^[4]

The “Lingshu • Zhongshi” states: “If the *renying* is exuberant by one degree, the disease is in the foot shaoyang; if it is agitated at one degree, the disease is in the hand shaoyang. If the *renying* is exuberant by two degrees, the disease is in the foot taiyang; if it is agitated at two degrees, the disease is in the hand taiyang. If the *renying* is exuberant by three degrees, the disease is in the foot yangming; if it is agitated at three degrees, the disease is in the hand yangming. If the *renying* is exuberant by four degrees, and it is large and rapid, this is called overflowing yang; overflowing yang is an external blockage. If the *maikou* is exuberant by one degree, the disease is in the foot jueyin; if it is agitated at one degree, it is governed by the hand pericardium. If the *maikou* is exuberant by two degrees, the disease is in the foot shaoyin; if it is agitated at two degrees, it is in the hand shaoyin. If the *maikou* is exuberant by three degrees, the disease is in the foot taiyin; if it is agitated at three degrees, it is in the hand taiyin. If the *maikou* is exuberant by four degrees, and it is large and rapid, this is called overflowing yin. Overflowing yin is an internal blockage; if the internal blockage does not open, death will result and cannot be cured. If the *renying* and the *maikou* of taiyang are both exuberant by fourfold or more, this is called a barrier pattern. In a barrier pattern, life will be short.”

On the Location of the *Renying-Qikou*

The *Neijing* says: “The *renying* is foot yangming, located in front of the neck sinew.” Then, in the *renying-qikou* pulse method, is it necessary to compare the neck *renying* pulse with the *cunkou* pulse? The *renying* pulse is the common carotid artery, while the *cunkou* pulse is the radial artery; the carotid...

the width of the moving pulse is many times greater than that of the radial pulse; therefore, the *renying* pulse is always greater than the *cunkou* pulse. How, then, can two vessels of such different thickness be compared with each other—such as the carotid artery and the radial artery?

In the *Maijing*, we see another possibility. *Maijing* · *Maifa Zan* [5] says: “One fen anterior to the guan is the master of human life; on the left it is the *renying*, and on the right it is the *qikou*. The shenmen point is at the jueyin, and both are posterior to the guan.” If we understand this according to “one fen anterior to the guan on the left hand is the *renying*, and one fen anterior to the guan on the right hand is the *qikou*,” then the two can indeed be compared.

On the operation of the *renying-qikou* pulse method

Introducing this meaning into the original text of *Lingshu* · *Zhongshi* allows a further interpretation. What are “one sheng, two sheng, and three sheng”? Beneath the graph “sheng” is the graph “𠂔” (*min*, vessel), meaning a utensil or dish; above is an elephant-like form, representing grain piled high. Its original meaning was ritual implements such as vessels filled to overflowing with grain; later it developed into a unit of measure. Thus one sheng, two sheng, and three sheng are three weighing standards for whether a pulse beat is small, medium, or large; by the magnitude of the point one fen anterior to the guan, one judges in which channel the disease lies.

People differ in height, body size, obesity, and leanness; the length of the cun used in acupuncture point location also varies from person to person. How, then, should the number of sheng at one fen anterior to the guan differ from person to person? How large, ultimately, is the standard “one sheng” at one fen anterior to the guan? Based on clinical palpatory experience: the size of the guan pulse is taken as the standard “two sheng.” If the point one fen anterior to the guan is clearly smaller than the guan pulse, it is one sheng; if the point one fen anterior to the guan differs little from the guan pulse, it is two sheng; if the point one fen anterior to the guan is clearly greater than the guan pulse, it is three sheng.

Advantages and disadvantages of the *renying-qikou* pulse method

This pulse method has the following advantages. First, it is simple and rapid to operate at the *cunkou* pulse. Second, it can quickly and accurately locate disease positions in the twelve channels and determine the state of qi-blood inclination and displacement. Third, the diagnostic system is complete and provides corresponding acupuncture treatment methods to guide clinical practice. Fourth, it

can reflect the state of yin-yang inclination and displacement of the body's qi and blood.

Its disadvantages are as follows. First, it cannot determine when multiple channels are diseased together. Second, it cannot determine the specific disease location in the zang or fu, nor its deficiency or excess state (though one may use slippery numbers for the fu and hesitant numbers for the zang).

7.4 Overall Yin-Yang Pulse Method

This pulse method comes from *Suwen · Jingmai Bie lun* and *Suwen · Yinyang Le lun*. The two chapters discuss similar procedures for the yin-yang pulse method, though some details differ. Among them, the account in *Suwen · Jingmai Bie lun* is relatively simple, whereas that in *Suwen · Yinyang Le lun* is more detailed.

The specific operating methods of this pulse method are: (1) diagnosing the cunkou pulse; (2) observing the overall pulsation, without distinguishing left from right, and taking any one part as sufficient (in clinical practice, for some patients in whom left-right pulse comparison cannot be performed—for example, patients who have undergone cardiac angiography and whose blood vessels have been damaged—this method can roughly determine yin and yang); (3) on the theoretical basis of yin-yang channel vessels, and through a composite diagnostic method such as disease in two channels at the same time, the diseases of the five zang are diagnosed; thus, its operating method is somewhat similar to the five-zang pulse method.

The advantage of this diagnostic method is that it can compensate for the shortcomings of other yin-yang pulse methods in diagnosing diseases of the zang and fu. Its disadvantage is that it cannot accurately determine the deficiency or excess of the zang and fu.

8 The Five-Zang Pulse-Method System (also called the “Overall Five-Zang Pulse Method” or the “Four-Season Five-Zang Pulse Method”)

8.1 Stage of Theoretical Embryonic Formation—the Four-Season Pulse Method

(1) The relationship between the four seasons and pulse manifestations— “the movements of the four changes; the pulse rises and falls with them”

The *Suwen · Maiyao jingwei lun* states: “Beyond the myriad things and within the six directions, the transformations of Heaven and Earth and the responses of yin and yang are as follows: that which in spring is warmth becomes the heat of summer; that which in autumn is urgency becomes the severity of winter. In the movements of the four changes, the pulse rises and falls with them: in spring it corresponds to the compass; in summer it corresponds to the square;

in autumn it corresponds to the balance; in winter it corresponds to the weight. Thus, on the forty-fifth day after the winter solstice, yang qi rises slightly and yin qi descends slightly; on the forty-fifth day after the summer solstice, yin qi rises slightly and yang qi descends slightly. Yin and yang have their times, and the pulse takes these as its periods; when the period is mutually lost, one knows where the pulse is divided. Since these divisions have their periods, one therefore knows the time of death. Subtlety and wonder lie in the pulse; it cannot but be examined. To examine it there are principles: beginning from yin and yang, it has its constant course; arising from the five phases, it has its measures of generation. The four seasons are appropriate; supplementing and draining must not be misapplied. Being at one with Heaven and Earth, by grasping the circumstances of that unity, one can know life and death.” This passage from the *Suwen* reflects the meticulous observation at the time of the laws governing changes in the natural world.

Beyond the myriad things and within Heaven and Earth, along with the changes of Heaven, Earth, and the four seasons, the state of a person’s yin-yang qi and blood will also undergo corresponding changes. Spring is warm, summer is blazing hot, autumn is cool, and winter is cold. As the four seasons change in the external world, the body’s yin-yang qi and blood likewise change accordingly, and these changes can be detected through pulse diagnosis— “in spring it corresponds to the compass; in summer it corresponds to the square; in autumn it corresponds to the balance; in winter it corresponds to the weight.” If the pulse cannot “correspond to the four seasons,” we can also make a broad judgment from the pulse manifestation as to which link in the body’s processes of birth, growth, harvest, and storage has developed a problem. If the characteristics of the body’s pulse manifestation cannot accord with the normal four seasons of the external world, this indicates that abnormalities have appeared in that process, in the corresponding zang organ, or in the meridian over which it presides. Through the abnormal features, we judge the general location of the disease; then, by determining whether there is a manifestation of “true zang,” we judge whether it is an ordinary disease or a condition bearing signs of “death.” This diagnosis is achieved through pulse diagnosis; hence it is said that “subtlety and wonder lie in the pulse; it cannot but be examined.”

“Spring, summer, autumn, and winter,” the four seasons, serve as a paradigm for the concept of yin and yang. “Spring engenders” and “summer grows” are states of “yang,” while “autumn harvests” and “winter stores” are states of “yin” ; therefore, in its early stage, the four-season pulse method was a kind of yin-yang pulse method. This passage also mentions that “to examine it there are principles: beginning from yin and yang, it has its constant course; arising from the five phases, it has its measures of generation.” When we say that spring engenders and summer grows as yang, and autumn harvests and winter stores as yin: from the perspective of the five phases, spring wood is said to bend and straighten, moving from bent to straight as a manifestation of generation; summer fire is said to blaze upward, a manifestation of luxuriant growth and nourishment; autumn metal is said to follow and transform, a manifestation

of solemn killing and astringent convergence; winter water is said to moisten downward, a manifestation of storage and downward movement. As the four seasons serve as a medium between yin-yang and the five phases, the four-season pulse method at this time already contained the germ of development in the direction of the five phases.

(2) On “weight, balance, compass, and square”

What, then, do “compass, square, balance, and weight” in this passage each represent?

The original meanings of “compass, square, balance, and weight” are four kinds of measuring instruments. The “compass” is a circular rule, a tool used to draw circles; the “square” is a curved ruler, a tool used to draw right angles and squares. The “balance” is the beam of a scale, and the “weight” is the scale weight.

Through “taking objects and comparing them by kind,” the ancients endowed these four implements with meanings at the philosophical level. We can find certain evidence in the contemporaneous *Huainanzi*.

For example, the *Huainanzi* says: “The compass is a measure: it turns without returning upon itself, is compliant without being chaotic……The balance is a measure: it is slow but does not lag behind, level but not resentful……The square is a measure of force: it is solemn but not apprehensive, firm but not angry……The weight is a measure: it is urgent but does not prevail, killing but does not cut off.” [6] The compass has the features of revolving and being round; the balance has the meaning of nourishing growth and the flourishing of the myriad things; the square has the characteristic of solemn killing; and the weight has the characteristic of storing.

On the basis of their characteristics, the ancients further matched them with the four seasons. The *Huainanzi* • *Shize xun* states: “In establishing measures, the great regulation of yin and yang has six degrees: Heaven is the cord, Earth is the standard; spring is the compass, summer is the balance, autumn is the square, and winter is the weight.” This explicitly indicates the correspondence “spring as compass, summer as balance, autumn as square, winter as weight.” This was the law of Heaven, Earth, and the four seasons established by ancient yin-yang scholars, referred to simply as the “seasonal rules.” It should be pointed out, however, that the order it describes is “compass, balance, square, weight,” corresponding to “spring, summer, autumn, winter.” This is the same as the statement in the *Neijing* that “spring corresponds to the compass, summer corresponds to the square, autumn corresponds to the balance, winter corresponds to the center of balance” differs slightly. Because of the insufficiency of historical materials, we cannot verify whether the correspondence between “spring, summer, autumn, winter” and the “regular measure of balance and weighing” is correct. Yet the core purpose of our study of pulse diagnosis is how to appreciate the spring pulse, summer pulse, autumn

pulse, and winter pulse.

(3) The concrete pulse images of the “four-season pulse method” (understood in conjunction with clinical evidence)

Let us look at the following specific descriptions of the four-season pulse images in the *Neijing*. The *Suwen: On the Essentials and Subtleties of the Pulse* says: “On a spring day it floats, like a fish swimming among the waves; on a summer day it is at the skin, with surplus in the flooding overflow of all things; on an autumn day it is below the skin, and the hibernating insects are about to depart; on a winter day it is in the bones, with the hibernating insects gathered closely together, and the gentleman dwelling indoors.”

From the original text we can see the following:

The characteristic of the spring pulse is an image of the surging and floating-up of qi and blood (in spring, the life mechanism surges outward). When pressing to feel the strongest point of the pulse, there is the sensation that the qi within is pushing upward and that it is surging and floating.

The characteristic of the summer pulse is an image of the fullness of qi and blood and a superficial pulse position (in summer, the life mechanism is exuberant); all things grow, qi and blood are full and brim outward, and the strongest point can be felt at the skin.

The characteristic of the autumn pulse is an image of the contraction and gathering of qi and blood, with the pulse position tending to be shallow (in autumn, the contracting mechanism is austere and killing). After the qi and blood have been robust in summer, they begin to contract inward; the strongest point can be felt slightly below the skin, but there is an image of restraint and contraction.

The characteristic of the winter pulse is an image of the closure and storage of qi and blood, with the pulse position deep and hidden (in winter, the storing mechanism is closed and concealed). The strongest point sinks and hides within, giving a sense that qi and blood are closed and stored.

(4) Summary of the four-season pulse method

First, the four-season pulse method originated from the ancients’ observation of the changes of yin and yang in heaven and earth through the four seasons. It is an early form of the five-zang pulse method, and is also a product of the fusion of yin-yang and five-phase thought; among these, the four seasons are the key point of entry into yin-yang and the five phases.

Second, the four-season pulse method was widely applied in meridian diseases to the selection and use of the five body localizations of disease and acupoint positions; it is an extension of the yin-yang pulse method.

Third, at this time the four-season pulse method did not yet include discussion of the long-summer pulse.

Finally, the four-season pulse method more often reflects the growth, contraction, and storage states of the life mechanism, and cannot directly diagnose diseases of the zang-fu organs, still less diagnose the deficiency or excess states of qi and blood in zang-fu disease.

8.2 The Formation Stage—the Evolution of the Four-Season Pulse Method into the Five-Zang Pulse Method

(1) Background of its emergence

In the middle Warring States period, the Jixia school appeared in the state of Qi. Combining the then-current concepts of “yin-yang” and the “five phases,” they were called the yin-yang and five-phase school. The *Guanzi* absorbed the thought of the yin-yang and five-phase school in combining the concepts of “yin-yang” and the “five phases,” thereby realizing the convergence of five-phase thought and yin-yang thought.

The *Guanzi: Explanation of Forms and Conditions* [7] states: “In spring, yang qi first rises, and therefore the myriad things are born; in summer, yang qi all rises, and therefore the myriad things grow; in autumn, yin qi first descends, and therefore the myriad things are harvested; in winter, yin qi all descends, and therefore the myriad things are stored. Thus spring and summer are for birth and growth, autumn and winter for harvest and storage: these are the divisions of the four seasons.” The myriad things arise according to the seasonal changes of spring, summer, autumn, and winter, with the phenomena of birth, growth, harvest, and storage. It holds that these are formed by the ascending and descending movements of the two qi of yin and yang. Therefore, the *Guanzi* used yin and yang to integrate the various affairs and things of the four seasons and the five directions. This was the first such instance in the pre-Qin classics that we can see, and it was an extraordinary contribution of the *Guanzi*.

In the “Four Seasons” chapter of the *Guanzi* it says: “The east is called star; its season is called spring; its qi is called wind. Wind generates wood and bones; its virtue flourishes and issues forth in timely order……Thus soft winds and sweet rains arrive; the people live long, and the hundred insects multiply: this is called star-virtue.” “The south is called sun; its season is called summer; its qi is called yang. Yang generates fire and qi; its virtue gives and shelters, and cultivates joy……The nine heats arrive; timely rains descend. The five grains and hundred fruits ripen: this is called sun-virtue.” “The center is called earth; earth-virtue truly assists; the four seasons enter and emerge, by means of wind and rain …”

junctures, and earth contributes force. Earth generates skin and flesh. Its virtue is harmonious and impartial; it is centered and without selfishness, and in practice it assists the four seasons……This is called the virtue of sui.” “The west is called chen; its season is autumn; its qi is yin, and yin gives rise to metal and jia. Its virtue is sorrow and restraint, stillness and rectitude, sternness and obedience……This is called the virtue of chen.” “The north is called yue; its season is winter; its qi is cold, and cold gives rise to water and blood. Its virtue

is floating and overflowing; its virtue is warm, angry, and dense……This is called the virtue of yue.”

After accomplishing the unification of yin and yang in regulating the four seasons, the *Guanzi* again uses the four seasons as an intermediary to bring about the convergence of yin-yang and the Five Phases. The *Guanzi* holds that qi can be divided into the two aspects of yin and yang; yin and yang, as two kinds of qi, transform and generate the Five Phases. Thus the convergence of yin-yang and the Five Phases is achieved, and the basic theoretical framework of qi-yin-yang-Five Phases was thereby formed.[8]

(2) The problem of correlating the four seasons with the Five Phases—the allocation of “earth”

The “Four Seasons” chapter of the *Guanzi* proposed one solution, namely the fourfold division method: the four seasons of spring, summer, autumn, and winter correspond respectively to the four directions east, south, west, and north and to the four phases wood, fire, metal, and water; while earth among the Five Phases does not govern a season independently, but flourishes in all four seasons, its virtue being integrated within the four seasons.

Another approach is the fivefold division method. The “Five Phases” chapter of the *Guanzi* divides the year evenly into five seasonal periods, each lasting seventy-two days, with each of the Five Phases governing one seasonal period.

After the doctrines of yin-yang and the Five Phases converged, and after the theoretical framework of “qi-yin-yang-Five Phases” had taken shape, the pulse method of the four seasons and five viscera naturally arose in response. On the issue of earth, this pulse method adopted the corresponding solution in which earth does not govern a season independently but flourishes in all four seasons, thereby presenting the distinctive feature that earth is “not to be seen in the good, but may be seen in the bad.”

(3) The three stages in the development of the pulse method of the four seasons and five viscera

In conjunction with the *Inner Canon*, we can see that, in the course of its development, the pulse method of the four seasons and five viscera roughly passed through three stages:

First stage: “*Suwen* • Treatise on the Qi Manifestations of the Common Person”: the balanced pulses of the five viscera, the diseased pulses of the five viscera, and the true-organ pulses—three diagnostic levels.

Second stage: “*Suwen* • Treatise on the Essentials and Subtleties of the Pulse”: on the basis of the diseased pulses of the five viscera, the “hard and long” and the “soft and scattered” further distinguish the “excess” and “deficiency” of five-viscera disease.

Third stage: “*Suwen* • Treatise on the True Viscera in Accordance with the Jade Pivot”: through the different features of “coming” and “going,” it distinguishes the

balanced pulses of the five viscera and the diseased pulses of the five viscera and further differentiates deficiency and excess, making them more concrete; this represents a deep integration of yin-yang and the Five Phases pulse method.

(4) The pulse method of the four seasons and five viscera in “*Suwen* · Treatise on the Qi Manifestations of the Common Person”

Judging “normality,” “disease,” and “death” by the amount of “stomach qi”

“The constant qi of the common person is endowed by the stomach; the stomach is the constant qi of the common person. If a person has no stomach qi, this is called adverse; one who is adverse dies. In spring, when the stomach qi is slightly wiry, this is called normal. If there is much wiriness and little stomach qi, this is called liver disease; but if the wiriness is without stomach qi, this is called death. The true qi is scattered in the liver; it is the qi of the liver storing the sinew membranes. In summer, when the stomach qi is slightly hook-like, this is called normal. If there is much hook-like quality and little stomach qi, this is called heart disease; but if the hook-like quality is without stomach qi, this is called death. The true qi communicates with the heart; it is the qi of the heart storing the blood vessels. In late summer, when the stomach qi is slightly soft-weak, this is called normal. If there is much weakness and little stomach qi, this is called spleen disease; but if the substituting pulse is without stomach qi, this is called death. The true qi is moistened in the spleen; it is the qi of the spleen storing the flesh. In autumn, when the stomach qi is slightly hair-like, this is called normal. If there is much hair-like quality and little stomach qi, this is called lung disease; but if the hair-like quality is without stomach qi, this is called death. The true qi is high in the lung; it conducts the constructive and defensive, yin and yang. In winter, when the stomach qi is slightly stone-like, this is called normal. If there is much stone-like quality and little stomach qi, this is called kidney disease; but if the stone-like quality is without stomach qi, this is called death. The true qi descends to the kidney; it is the qi of the kidney storing the bones and marrow.”

“Stomach qi” is a basic concept in the *Inner Canon*. The amount of “stomach qi” determines the severity of the illness. From this passage we can see that, for the five pulses— “wiry, hair-like, hook-like, stone-like, and substituting” —each has three diagnostic levels: “normal,” “disease,” and “death,” and stomach qi plays an important role among them.

The Heart Pulse: “Normal Pulse,” “Diseased Pulse,” and “Death Pulse”

“When the normal heart pulse arrives, it is continuous and cumulative like linked pearls, like following the *langgan*; this is called a normal heart pulse. In summer it takes stomach qi as its root. When the diseased heart pulse arrives, it comes in panting succession, slightly curved within; this is called disease of the heart. When the death pulse of the heart arrives, it is curved in front and bent behind, like manipulating a belt hook; this is called death of the heart.”

Normal heart pulse: In summer, the myriad things grow and are nourished; the climate is hot, and qi and blood disperse outward. Under the fingers, it is like a string of pearls sliding past. “*Langgan*” has two interpretations: one is a bead of jade or stone, smooth and rounded; the second is the fruit of an immortal tree in mythology, like a string of pearls. The characteristic of the normal heart pulse is precisely a sensation like touching a string of full, round, lustrous beads.

Diseased heart pulse: The character “喘” (*chuan*), according to the *Shuowen*^[8], means “喘者疾息也” (“to pant is rapid breathing”). “喘喘连属” means that “喘喘” conveys urgency and rapidity. “Slightly curved within”: the *Shuowen* says, “(曲)象器曲受物之形, 古字为 ‘匚’, ” describing the form of a vessel bent to receive things; the ancient graph was “匚.” It depicts a feeling of a force that rises greatly but falls back insufficiently. Thus the sensation of the diseased heart pulse is one of rapid frequency, a large upsurge, and insufficient return.

Death pulse of the heart: “Curved in front and bent behind” : “居” is the original character of “踞,” resembling a person bending the shins and squatting. Its basic meaning is to squat; therefore it is like being large in front and quickly declining behind, with all the qi surging out. “Like manipulating a belt hook” : the hook is like a fishhook—coming up very smooth and large, then quickly bending downward. Therefore the characteristic of the death pulse of the heart is that it is not supple and harmonious; it rises greatly and then rapidly declines, becoming weak.

The Lung Pulse: “Normal Pulse,” “Diseased Pulse,” and “Death Pulse”

“When the normal lung pulse arrives, it is light and floating, like the fall of elm pods; this is called a normal lung pulse. In autumn it takes stomach qi as its root. When the diseased lung pulse arrives, it neither rises nor descends, like following a chicken feather; this is called disease of the lung. When the death pulse of the lung arrives, it is like something floating, like wind blowing on hair; this is called death of the lung.”

Normal lung pulse: After the autumn heat of heaven’ s qi, it gradually turns cool; qi slowly contracts inward, preparing for storage. “厌厌” : in the *Book of Odes*, *Zhou Song*, *Zai Jian*^[9], “厌厌其苗, 绵绵其麋” ; here “厌厌” refers to the orderly and luxuriant growth of plants. In the *Book of Odes*, *Qin Feng*, *Xiao Rong*, there is “厌厌良人, 秩秩德音” ; here “厌厌” is explained as tranquil or at ease. “聂聂” : the *Shuowen* says, “聂, 附耳私小语也” (“*nie* means whispering privately close to the ear”). “聂聂” may be understood as light, vacuous, and level. Borrowing Han Yu’ s poetic image of elm pods, one may imagine: “The willow catkins and elm pods have no talent, only understanding how to fill the sky and fly like snow.” It is a feeling of light emptiness, slowly drifting down, with qi gradually being drawn inward.

Diseased lung pulse: The characteristic of a chicken feather is lightness and vacuity—the sensation of being light, empty, without force, lacking strength, and with qi unable to be gathered inward.

Death pulse of the lung: Wind blows the feather, and the feather is carried away by the wind. It is a state of lightness, vacuity, floating, and rootlessness; the person's qi dynamic cannot be drawn inward and instead disperses completely outward—this is the death pulse.

The Liver Pulse: “Normal Pulse,” “Diseased Pulse,” and “Death Pulse”

“When the normal liver pulse arrives, it is weak and beckoning, like touching the tip of a long pole; this is called a normal liver pulse. In spring it takes stomach qi as its root. When the diseased liver pulse arrives, it is full and slippery, like following a long pole; this is called disease of the liver. When the death pulse of the liver arrives, it is urgent, full, and forceful, like a newly strung bowstring; this is called death of the liver.”

Normal liver pulse: After the storage of winter, the weather in spring begins slowly to turn warm. Thus qi is generated slowly and lightly, with a soft, weak, continuous feeling, like touching the tip of a long pole. What are the characteristics of a long pole? The first is that it is long. The second is that the lower part of bamboo is very thick and hard, while the tip of the bamboo pole, because it is about to put forth new growth above, grows gradually; after the bamboo has grown tall, it bends slightly and has an appearance of suppleness. Therefore the normal liver pulse is the sensation of spring generation: soft, weak, gentle, and long.

The diseased liver pulse has more of the pulse's qi coming out all at once; when pressed downward, there is a slippery, solid, and long sensation. Because more qi dynamic surges outward, the tension of the vessel increases, and the vessel presents a string-like, hard sensation—just as a bamboo pole has, in addition to length, a sense of hardness.

The death pulse of the liver has a sensation of urgency, forcefulness, and length, like a fully drawn bowstring, with a taut feeling. Once this pulse image appears in a person, the illness is usually very serious, even fatal.

The Spleen Pulse as “Normal Pulse,” “Diseased Pulse,” and “Death Pulse”

“When the normal spleen pulse comes, it is harmonious and soft yet distinct, like a chicken treading on the ground; this is called a normal spleen pulse. In long summer it takes stomach qi as its root. When the diseased spleen pulse comes, it is solid and rather excessive, like a chicken lifting its foot; this is called spleen disease. When the death pulse of the spleen comes, it is sharp and hard like a bird's beak, like a bird's distance, like a leaking roof, like water flowing; this is called death of the spleen.”

Normal spleen pulse: The spleen governs the four seasons, nourishing the other viscera. The “separation” in “harmonious and soft yet distinct” is yellow, and is also *cangeng* [barnyard millet]. That is, yellow millet. The characteristics of yellow millet are that its sound turns and is heard, and its nature is warm

and soft. “A chicken treading on the ground” means light, slow, and unhurried. Overall, the normal spleen pulse is a sensation of softness, weakness, slowness, and ease.

Diseased spleen pulse: The normal spleen pulse is primarily soft and weak. If it is very replete, to the point of being solid and rather excessive, this represents spleen disease. Like a chicken lifting its foot, it is urgent yet forceful—a sensation of fullness, smoothness, excess, and strength. Patients with this kind of pulse generally present with abdominal distension, constipation, and food accumulation.

Death pulse of the spleen: The death pulse of the spleen has several notable features. The first feature is that it is like a bird’s beak: sharp and hard in sensation. A bird’s “distance” is also very sharp and hard. The second feature is that it appears like a house with many leaking drops: each leaking point has its own rhythm, and many leaking points mixed together resemble the irregularity and disharmony of the pulse beat, with the “three and five” not regulated. If a person’s heartbeat is very irregular, it is not necessarily only a cardiac problem; in treatment one must also take into account problems of the spleen and stomach. The third feature is that it is like water flowing: in feeling the pulse, one can sense blood flowing past beneath the fingers. Because the beating of the heart allows us to feel the rise and fall of the pulse, this death pulse of the spleen means that, when the blood is flowing, there is no longer any rising and falling tendency; it flows past smoothly and evenly.

The Kidney Pulse as “Normal Pulse,” “Diseased Pulse,” and “Death Pulse”

“When the normal kidney pulse comes, it is panting and surging as if hooked; when pressed it is firm. This is called a normal kidney pulse. In winter it takes stomach qi as its root. When the diseased kidney pulse comes, it is like pulling on kudzu vine; when pressed it is firm. This is called kidney disease. When the death pulse of the kidney comes, it arrives like seizing a rope, sharply and abruptly like flicking a stone; this is called death of the kidney.”

Normal kidney pulse: In winter, the qi dynamic is closed and stored; when qi is in a dispersed state, the pressure is small. When it is in a contracted state, the pressure becomes great. The greater the tension of the blood vessels at the side, the more there is a sensation of panting, surging, urgency, and fullness. It is somewhat similar to a flooding pulse, but it differs from the heart pulse. When the heart pulse is pressed downward, because the qi dynamic has dispersed outward and has not arrived, the kidney pulse, by contrast, just as it meets the pulse, has the sensation of urgency, force, and fullness. The further one presses downward, the more forceful it becomes, because all the qi has been gathered internally; therefore it is called “firm when pressed.”

Diseased kidney pulse: “Like pulling on kudzu vine.” Kudzu root has the effect of eliminating turbid qi and raising yang qi. The characteristic of the kudzu plant is that its root system is especially developed and its water-absorbing ability is

especially strong. Therefore the above-ground part of kudzu proliferates very rapidly. Kudzu: the *Shuowen* says: “*Ge*, a grass.” The original meaning is a kind of vine plant. Kudzu vines are soft and pliant, with toughness, and do not break easily; they are an excellent natural cord. The stems can be woven into baskets and used as rope; the fibers can be woven into cloth; the tuberous roots are enlarged and are called “kudzu root.” Kudzu vines grow round after round, very rapidly. “Pulling kudzu vine” is like a child pulling a kudzu vine: it has a soft, resilient feel, and when pressed downward it is very firm. What Cang Gong described as “floating, great, and tight; when pressed, greatly firm” is precisely the sensation of this diseased kidney pulse.

Death pulse of the kidney: It is like pulling on a coarse, rough, dry rope. In the preceding text it was called “pulling”; here it is called “seizing.” One is tugging and one is grabbing, so the sensations are different. The characteristic of the death pulse is that it is urgent and forceful, hard, and when pressed downward it is like stone.

8.3 The Final Stage of Perfection of the Four-Season and Five-Viscera Pulse Method—“Su Wen • Treatise on the True Viscera in Accordance with the Jade Pivot”

The “Su Wen • Treatise on the True Viscera in Accordance with the Jade Pivot” further perfects the pulse method on the basis described above. On that basis, it introduces two new concepts and corresponding diagnostic dimensions, summarized as follows:

(1) The Concepts of “Coming” and “Going”

What are “coming” and “going”? The *Treatise on Cold Damage • Method of the Normal Pulse*^[10] states: “The Master said: respiration is the head of the pulse. When first taking the pulse, coming indicates illness and going indicates recovery; this is called internal deficiency and external repletion. When first taking the pulse, coming indicates recovery and going indicates illness; this is called external deficiency and internal repletion.”

From this it can be seen that the “coming” and “going” pulse method is a yin-yang pulse method. “Coming” corresponds to “exhalation,” representing the outward-dispersing state of the qi dynamic, an image of yang, and corresponds to the pulse’s “surging upward to fullness”; “going” corresponds to “inhalation,” representing the inward-collecting state of the qi dynamic, an image of yin, and corresponds to the pulse’s “descending from fullness to decline.”

Therefore, the *Treatise on the True Viscera in the Jade Mechanism* is a high-level composite pulse method that integrates the five-viscera pulse method with the yin-yang pulse method.

(2) Diagnosis of Deficiency and Repletion of the Five Viscera

The earlier five-viscera pulse method could only determine “the disease is in the liver” and the severity of the disease (“normal,” “diseased,” or “dead”); whereas the *Plain Questions • Treatise on the True Viscera in the Jade Mechanism* adds diagnosis of deficiency and repletion of the five viscera. In this, repletion is evidenced by “if it is excessive, then the disease is on the exterior,” and deficiency is evidenced by “if it is insufficient, then the disease is in the interior.” How should “if it is excessive, then the disease is on the exterior” and “if it is insufficient, then the disease is in the interior” be understood?

The *Plain Questions • General Discussion on Deficiency and Repletion* says: “Bo replied: When pathogenic qi is exuberant, there is repletion; when essence qi is taken away, there is deficiency.” “Disharmony of the five viscera is produced by obstruction and blockage of the six depots.”

The ancients believed that repletion patterns of the five viscera were mostly caused by external pathogenic factors (external evils, food and drink, emotions, etc.) leading to stagnation of the qi of the five viscera, thereby causing repletion patterns of the five viscera. Deficiency patterns of the five viscera were mostly caused by weakness of the essence qi of the particular viscus, thereby leading to deficiency patterns of the five viscera.

(3) Specific Pulse Images of Deficiency and Repletion of the Five Viscera

Deficiency and Repletion of the Liver Pulse

“The Yellow Emperor asked: When the spring pulse is like a string, how is it string-like? Qi Bo replied: The spring pulse corresponds to the liver; in the east it corresponds to wood. It is that by which the myriad things first come into being. Therefore, when its qi comes, it is soft, weak, light, deficient, and slippery; its end is straight and long. Thus it is called string-like. If it is contrary to this, it is disease. The Emperor said: How is it contrary? Qi Bo said: If its qi comes replete and strong, this is called excessive, and the disease is on the exterior; if its qi comes not replete but slight, this is called insufficient, and the disease is in the interior.”

From the original text it can be seen that the characteristics of the normal pulse are that its end is straight, long, soft, weak, light, deficient, and slippery; the characteristic of excess is that it “comes replete and strong”; the characteristic of insufficiency is that it “comes not replete but slight.”

Spring represents the slight growth of yang qi. Thus it resembles the slow growth of yang qi, giving a feeling of being straight and long at the end. The normal pulse represents the slow emergence of soft yang qi, and so it is called soft, weak, light, deficient, and slippery. When we speak of “coming” and “going,” “coming” represents the process by which the pulse rises up to fullness. Spring represents

the slow emergence of yang qi, and therefore the liver pulse is mainly palpated through the process from rising up to reaching fullness. If, when palpating the pulse, it is long and, during the process of “coming,” the qi pressing upward is very agitated and full, this indicates that the person’s liver qi is too exuberant; this is a liver repletion pulse. Likewise, if it is similarly long but the qi pressing upward is very weak and there is no qi or blood issuing outward, it represents a liver deficiency pulse.

Deficiency and Repletion of the Heart Pulse

“The summer pulse is like a hook. How is it hook-like? Qi Bo said: The summer pulse corresponds to the heart; in the south it corresponds to fire. It is that by which the myriad things flourish and grow. Therefore, when its qi comes, it is exuberant, and when it goes, it declines. Thus it is called hook-like. If it is contrary to this, it is disease. The Emperor said: How is it contrary? Qi Bo said: If its qi comes exuberant and goes also exuberant, this is called excessive, and the disease is on the exterior; if its qi comes not exuberant and goes instead exuberant, this is called insufficient, and the disease is in the interior.”

From the original text it can be seen that the characteristics of the normal pulse are that the heart pulse image is long, surging, full, with the rising tendency full and the declining return fading; the characteristic of excess is that both the rising tendency and the declining return are full; the characteristic of insufficiency is that the rising tendency is without force, while the declining return is instead slightly full.

In summer, yang qi disperses outward; the yang qi of the whole person is dispersed on the exterior, and therefore it has an image of flooding, great fullness. The normal pulse is “coming exuberant and going declining.” Much qi issues outward and little returns, just as in summer the qi all disperses outward; therefore it is called “coming exuberant and going declining.”

Thus, the even pulse represents the gentle dispersion of qi; therefore its onset is full and its return declines. This pulse has a great onset and a substantial return, representing the heart’s replete pulse. If this pulse, when felt, does not arrive with strength, yet on returning to its apex instead has a stirring tendency, so that qi cannot disperse outward, somewhat resembling the liver pulse but lacking the image of “length,” this is the heart’s vacuous pulse. In insufficiency of heart yang, patients with some degree of heart failure may commonly present with this situation.

Vacuity and repletion of the lung pulse

“The autumn pulse is like floating. What is meant by floating? Qi Bo said: The autumn pulse corresponds to the lung; to the west and to metal. It is that by which the myriad things are gathered and completed. Therefore, when its qi comes, it is light, vacuous, and floating; when it comes it is urgent and when it goes it disperses.

Hence it is called floating. The opposite of this is disease. The Emperor said: What is meant by the opposite? Qi Bo said: When its qi comes, the hair is central and firm, while the two sides are vacuous; this is called excess, and the disease is external. When its qi comes, the hair is slight; this is called insufficiency, and the disease is internal.”

From the original text it can be seen that the even lung pulse is characterized by being light, vacuous, and floating; its onset is slightly tight and urgent, and its return is vacuous and dispersing. The characteristic of excess is that the onset is slightly tight and urgent but not replete; when pressed to the apex, the beat strikes the finger and is replete, while the return is vacuous and weak. The characteristic of insufficiency is that it is vacuous, dispersing, and without strength; both the onset and the fall are vacuous and weak.

In autumn, yang qi begins gradually to return and fall, slowly contracting; therefore it has a somewhat light, vacuous, floating quality, with a sense of slowly descending. When the pulse “comes,” because the weather in autumn turns cooler, there is a slight sense of constraint; when it returns, there is some dispersion and a slow descent. Hence it is said to come urgently and go dispersingly. The lung’s replete pulse is slightly tight and urgent when it comes; when pressed to its apex, the qi again feels very firm and replete, while when moving downward it is relatively vacuous and weak. This is called “central firmness with vacuity on both sides.” The lung’s vacuous pulse is vacuous, dispersing, and without strength; both its onset and fall are vacuous and weak, giving only a slight sensation at the hair level.

Vacuity and repletion of the kidney pulse

“The winter pulse is like ying. What is meant by ying? Qi Bo said: The winter pulse corresponds to the kidney; to the north and to water. It is that by which the myriad things are united and stored. Therefore, when its qi comes, it sinks and then presses; hence it is called ying. The opposite of this is disease. The Emperor said: What is meant by the opposite? Qi Bo said: When its qi comes like a pellet stone, this is called excess, and the disease is external. When its going is like counting, this is called insufficiency, and the disease is internal.”

The *Shuowen* says: “Ying means to dwell.” Here it refers to dwelling in the soil of the four peripheries. The “Liyun” chapter of the *Book of Rites* says: In winter it dwells in the storeroom.

Therefore, the even pulse is characterized as follows: the winter pulse has the image of storing; it is sunken, firm, and forceful, and its coming and going are even. The characteristic of excess is that it is sunken, firm, and replete, hard as stone when touched. The characteristic of insufficiency is that when lifted it is sunken, firm, and forceful, but its return is rapid and without strength, indicating that the gathering of qi is insufficient.

In winter, the onset begins to be stored, like a ying; ying refers to the houses that the ancients themselves covered in winter—the more firm and solid they were inside, the warmer they remained. Qi is pressed within, and its qi has a kind of counter-resisting pressure; therefore, when one feels the vessel, it is very firm and hard. Thus, in winter it is an image of being sunken, firm, and forceful. The even pulse represents sunken firmness and strength, with coming and going even. In the kidney's replete pulse, this pulse sinks inward very solidly, with very high tension, the vessel cord feeling like a stone. The characteristic of kidney vacuity is that when lifted there is a sense of contraction. We say that "going" represents contracting and storing; when the pulse returns, it cannot be stored, and the qi has completely dispersed outward—this is called "its going is like counting." When lifted, it is still firm and hard, but on returning it is rapid and without strength. Only when this pulse is encountered can the kidney be supplemented; otherwise, once supplemented, there will be fire flaring upward.

Vacuity and repletion of the spleen pulse

"The Emperor said: In the sequence of the four seasons, there are variations of reversal and compliance. Yet why is the spleen pulse alone the ruler? Qi Bo said: The spleen pulse corresponds to earth; it is isolated and irrigates the four sides. The Emperor said: Then are the good and bad states of the spleen not to be seen? Qi Bo said: The good cannot be seen; the bad can be seen. The Emperor said: How can the bad be seen? Qi Bo said: If its coming is like the flow of water, this is called excess, and the disease is external; if it is like the beak of a bird, this is called insufficiency, and the disease is internal.

The pulse is weak and slippery; this is stomach qi."

The spleen manifestation, which nourishes the four viscera: soft, weak, and slippery; in a good condition it cannot be detected. Excessive: coming and going evenly, without the tendency to rise and fall; insufficient: its rising tendency is even and sharp, and its return is weak.

The spleen nourishes the four viscera; therefore, softness, weakness, and slipperiness are normal, and in the normal state it cannot be detected. The spleen's true pulse is like the flow of water: when one palpates it, its pulsation comes and goes evenly without any tendency to rise and fall. In the deficiency pulse of the spleen, "like the beak of a bird" means that it resembles a bird's beak: it emerges level, and then bends downward toward the end. Thus, when palpating the pulse one senses the movement of qi and blood; on one side the finger can still feel it passing by calmly, while on the other side it is so weak that it can no longer be palpated.

On the true visceral pulses of the five viscera

The true visceral pulse is a pulse manifestation indicating a critical illness. The appearance of a true visceral pulse means that the body's stomach qi is deficient

and has lost the capacity to coordinate and regulate the rising and sinking of yin and yang in the four seasons; in general, the prognosis is poor. All five viscera may have a “true visceral pulse,” and their specific manifestations are as follows:

“When the true liver pulse arrives, it is urgent both within and without, like following the edge of a knife, sharply so, or like pressing on the string of a zither” —this is the true visceral pulse of the liver. Its characteristics are “stringlike, urgent, and without stomach qi” ;

“When the true heart pulse arrives, it is firm and can be struck, like following coix seeds, compactly so” —this is the true visceral pulse of the heart. Its characteristics are “firm, palpable with impact, and without stomach qi” ;

“When the true lung pulse arrives, it is large and empty, like a feather brushing a person’s skin” —this is the true visceral pulse of the lung. Its characteristics are “large, empty, and without stomach qi” ;

“When the true kidney pulse arrives, it is palpable yet cut off, like flicking a stone with the finger, resonantly so” —this is the true visceral pulse of the kidney. Its characteristics are “palpable, firm, sunken and cut off, and without stomach qi” ;

“When the true spleen pulse arrives, it is weak, and the beat is sparse and uneven” —this is the true visceral pulse of the spleen. Its characteristics are “weak, and with the three and five not harmonized.”

7 Conclusion

The above constitutes the full content of this article. Beginning with the *Medical Records of Cang Gong*, this paper discusses the diagnostic characteristics emphasized by the famous Western Han physician Chunyu Yi. On this basis, it organizes the two systems of pulse diagnosis in the *Inner Canon*, and, in conjunction with contemporary clinical practice, summarizes the clinical manifestations of the various pulse forms found in the ancient texts.

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