

Abstract

For Chinese Medicine, the zygomatic bone (cheek bone) and its variations in shape and color are, at the same time, clinical diagnosis markers and a predictive tool of health/sickness.

Both anatomy-physiology and semiological quotations mentioned in **Nei Jing Suwen Lingshu** are studied here.

Key Words

Bone- Zygomatic bone – Cheek bone- Classical Chinese medicine reference books

Introduction and Goals

The temporomandibular joint is relevant in biomedicine; therefore we consider that reviewing the ancient Chinese medicine books contents is an excellent tool of anatomy-physiological and semiological knowledge

Nei Jing Suwen Lingshu provides the information this paper is based upon, taking into account the relevance of bones role in classical Chinese medicine morpho-physiology.

Chapter 11 of **Suwen**, sums up the description of body organization and, mentioning them only once, explains about **qi heng zhi fu** –extraordinary viscera with lasting activity- extraordinary organs also known as curious organs.

All further reference to these organs found in other texts, are more or less accurate quotations from this **Suwen** chapter. Extraordinary viscera are **fu**-viscera which function as **zang** organs, that is to say with **yin** quality because they store but they do not evacuate.

Such viscera are: **nao**-brain, **sui**-marrow, **gu-bone**, blood vessels-**xue mai**, gall bladder-**dan** and uterus-**zi gong**. They constitute a six- viscerum group which form **yinyang** pairs in the three levels Heaven- Man- Earth, following a water-fire archetypical combination.

In Heaven, the symbol of macro and microcosmic life order brain and marrow are paired up. The brain represents both fire and water; fire through the heart where **Shen**, the spirit, is located, and water through the kidneys because they produce the Marrow

The Earth gathers bones and **mai**-vessels. **Suwen** 23 states that bones are ruled by the kidney-water pair. The skeleton is a rigid and protective structure which holds brain and marrows, kidneys and heart and inner genitals and such structure remains after death as the genealogical lineage foundation of human beings. Fire comes from **mai** (vessels/blood/heart)

At Man level we find the gallbladder-fire, this viscerum is the one in charge of managing both beginnings and decisions and is related to gestation, therefore linked to the uterus which protective membranes are, as water is, source of change.

Gall bladder and gestational dynamics (**bao**, another word for uterus) belong to the man realm. Chinese language is metaphorical and so are the words it uses, that is the reason for the expression gestational dynamics since it talks not only about uterine fecundation but also about the **bao** in men, a creational function rather than an anatomical organ. The gall bladder is a decision-making organ and so it takes care of gestation, both physical and spiritual.

Among these six extraordinary organs we are going to focus now on **gu**-bone which is related to bone and vertebral marrow and any other tissue contained in a bone.

When using the term **gu**, Chinese refer to alive bones and not to isolated bones. The ideogram which represents this idea talks about bones coated with flesh because they are able to function just due to its union with muscles and tendons.

The definition of bone in ancient Chinese medical dictionaries points out that bone is that which can be found in the depth of flesh, the frame that holds the organism, the trunk of the tree; it also states that it has both a protective and a dynamic function; protective in head, thorax and pelvis and dynamic

because it allows the body movements.

The anatomical functional metaphor shows that everything that flows needs to be guided; as the stones guide the river stream so the bones- due to their firmness- guide liquids, blood, essences and energy.

The sinogram gu is the radical base of other characters as well and in ancient graphic representations gu is part of **sui**-marrow. The relationship between bone and marrow gets established by the common source of the kidneys essences producing marrow, which in its turn, nourishes the bones; they form a **yinyang** pair, the inner and the outer, the hard and the soft, constituting the body structure, the natural duration of life.

Several bones are worth noting in the human body, some of them are: **gao-gu** eminent bone protruding from the **mingmen** region, the gate of life, second lumbar vertebrae; **dazhui**...big vertebrae, the seventh cervical vertebrae as well as **quan**cheek bone or zygomatic arch formed by the zigoma and the malar bone; the S I 18 point called **quan liao** where the three **yang** tendinomuscular meridians of the foot meet and both arm **tai yang** and **shao yang**. Also worth mentioning in the cheek bone area are: the prominent bone below the eye, and finally **jia che gu** (vehicle, supporting structure and transport of teeth) which refers to the jaw joint, the area before the ears related to E6 point.

Anatomical and clinical information on the Zygomatic bone can be found in **NeiJing**, this bone is considered to be the root of all bones: it protrudes and is the most standing out

bone before reaching the cranium, it also gives support to the eye and **Ling Shu 46** says that “the cheek bone shows us the proportion of the whole body right from the face”

The Zygomatic area, with its changes in color, clinically marks health or disease.

Suwen 32 says that when it shows a blackish color, clearly different from the forehead or other parts of the face color, a kidney condition is revealed; if it's red the information points to heart pathologies. Because of **yang** predominance due to insufficient kidney water, everything damaging the kidneys, especially cold, will have its repercussion for bones and marrows. Excess of heat in spleen will produce a heavy head in first place and then sore cheeks and pain in both jaws.

If reddish tone is moving downwards from cheeks to the cheek bones, an important abdominal congestion is marked; if color comes upwards from behind the zigoma, hypochondrium pain is marked and if it comes from above the arch, pathology is located at diaphragmatic level.

Suwen 42 describes the Wind in the Kidneys and mentions that it can be diagnosed through the presence of coal black skin especially on cheek bones among other symptoms.

Ling Shu 49 when talking about the semiology of diseases related to the four limbs highlights the cheek bone as a shoulder reference, and we have already mentioned that both TR and ID meet under the zigoma.

The central area of the cheek is related to pathology in large intestine while the area below the cheek bone (kidney diseases) reflexes umbilical area suffering.

Cheek bone prominence and size indicate the strength of the individual and its natural completion. **Lingshu** points out that when the physical body is solid and the cheek bone does not stand out as preeminent, the skeleton is too small and a person with an over small skeleton will die at a young age. Watching a person's face we may realize how long he/she will live, if the bones around the ear are flat and depressed and they do not reach the muscle in front of it, this individual will die before reaching the age of thirty.

Conclusions

In order to design a prognosis and a treatment in the practice it is really important to know the semiological data clinical observation bring us. Classical Chinese medicine books constitute a constant and detailed information source when dealing with a health-sickness approach.

Their reading and their study are at the base for professional training for Medicine Doctors both in Asia and Europe.

Unlike what happens with their contemporary counterparts in western medicine where respectful reading of Classical books is confined to both medicine historians and medicine scholars, reference books dating from Ancient China are a day-to-day tool for the new generations of health professionals in their formation and training.

Data and quoting brought to us by such books constitute excellent guidance for clinical practice and, in my opinion, this is so because they explain the conceptual theoretical basis of the Chinese medicine which has not lost the philosophical references it is based upon.

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