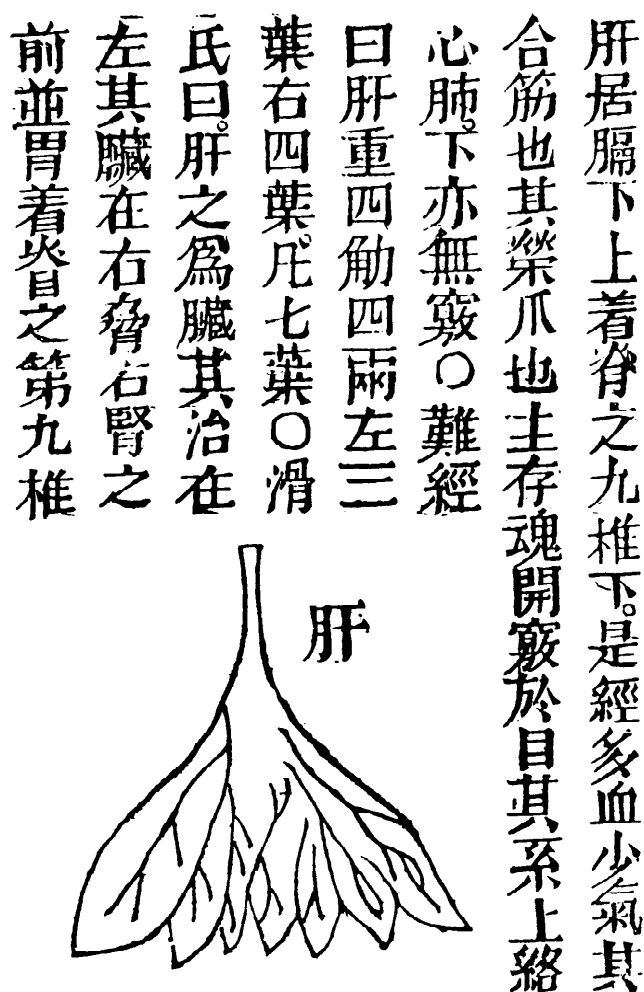


THE LIVER, in the Chinese Medicine Classics

An Instructive Discussion (from Larre & Rochat, 1994, *The Liver*)

PHYSIOLOGY AND FUNCTIONS OF THE LIVER

Elisabeth Rochat: We see from the texts of the Su wen and Ling shu that the liver is an essential organ in the human body, having the charge of general of the armed forces, which is in harmony with the nature of the liver, being very firm and correct, and being at the beginning of movement. There is a masculine force in the liver, and along with the heart it is referred to as a male organ because of this force which is directed to the expansion and diffusion of life. The spleen, lung and kidney are all called female.



The Liver,
from *Lingshu Suwen Jieyao*

It is the capacity for movement, decision, courage and firmness which characterizes the liver, and which is summed up in the sentence from Su wen chapter 8 about it being the general of the armed forces. But a general must not let himself be carried away. Through the inheritance of the hun it has the possibility of analysing and discerning, and of assessing situations and acting in accordance with them. This facility is found in all the functions of the liver: in storing the blood, in the defence of the body, and its actions on the muscles.

The liver is described in the classics in an anatomical way which shows that the Chinese very well understood where the liver was in the body and what form it took. But we know that this anatomical description of the liver is only the visible manifestation of the liver in the material form of flesh and tissue. The function of the liver in traditional Chinese medicine is more on the side of the profound movement which springs up and surges forth.

The Liver Stores the Blood

Claude Larre: The Chinese character cang is not very easily translated into English. When we say 'store' it is the idea of keeping preciously, treasuring, or thesaurizing.

Question: How do we define that kind of storing?

Elisabeth Rochat: It is to keep actively, in such a way that by storing everything in life may come out. The effects of life can come from the storing. What we call the zang have the same ideogram, and the zang are nothing more than 5 different ways of storing and treasuring the essences for the emission of qi and the continual structuring of life. You must never consider this storing like keeping something closed up in a box. It is to be full and to be seeped in the power of the jing and qi. This is to understand what each organ has to do for life and to have the means of doing it. For example, the liver has this movement of expansion and springing up which at the level of the body is seen in the muscles, or at the level of the mind in allowing the conception of plans.

Because the liver keeps the blood it allows the springing up of different effects, just as seeds germinating in the soil become flowers in springtime by means of the rising sap. This is all seen in the character for wood which is the element linked with the liver. An old Chinese explanation for this ideogram mu is that you have the trunk planted vertically in the ground, you have the leaves and branches and you can see the roots beneath. That is to say it is only because there is a deep rooting that there can be a springing up towards heaven. Hence the first function of the liver is as the guardian and distributor of the blood. The liver stores but also releases it.

It says in Su wen chapter 10:

When a man is at rest the blood returns to the liver. The liver receives the blood and one can see.

If the liver receives the right quantity of blood and sends it to the eye, the vision can be of good quality.

Feet receive blood and one can walk. The palms of the hands receive blood and one can grasp objects. The fingers receive blood and one can pick things up very carefully.

At every stage of movement both the precision and the strength are reliant on the liver. It is the liver that has to release the right quantity of blood necessary for all muscular activity. It also has a nutritive role in that the blood itself has a general nutritive role for the zang and fu, as well as for all layers of bodily structure, from the bones to the skin.

When a man is asleep or at rest with his limbs and muscles no longer working, and his orifices and sense organs closed and not functioning as they do when he is awake, then the blood returns to the liver and you have the activity of dreaming which comes about through the hun.

If this function of the liver storing the blood is disturbed then the repercussions can appear in all activities of the body, for example in the quality of sight or in the muscular forces when a deficiency of liver blood gives rise to cramps and spasms. It can also affect joints and articulations, anything which is in the realm of bending and extending. This bending and straightening is the most fundamental aspect of the wood element. There can also be repercussions in a woman's menstruation, such as amenorrhoea, particularly if less blood is available. The liver has, in certain classical texts, also been called 'the sea of blood'. This brings it into direct relationship with chong mai, and we should remember that the third point on the liver meridian is called tai chong, the powerful current, full of impetus and buoyant strength. This reminds us that chong mai and ren mai are equally essential in the - reproductive life of a woman, and certainly the liver is one of their heirs or assistants in this function of storing the blood.

The Formation of Blood

Elisabeth Rochat: The spleen has a double function in relation to the blood. Together with the stomach it extracts and works on the very concentrated, dense juices and liquids. By means of the pathway of tai yin there is a passage from the middle heater to the upper heater, and as these liquids are by then very pure, they can pass through the diaphragm. They are presented to the field of oxygenation in the lungs and then after that they go to the heart. There a radical change takes place. The blood becomes red because the heart has put its mark or stamp on the liquids which before were just very rich juices, but which then become blood. That is to say the blood is liquid which has the colour of fire and has the ability to bring life to the whole body because it is penetrated by the power of the shen.

Therefore the spleen has the function of elaborating the very rich liquids which form the basis of the composition of blood. The heart puts its stamp on these liquids, and the colour red is the seal showing the presence of the spirits. It is through its pulse and all the mai, the life-giving network of vital animation, that the heart directs and maintains the free circulation for life. The spleen's relation to the blood lies in maintaining its form and keeping it in place. For example, haemorrhage and extravasation are symptoms coming from the spleen. This is different from having too much blood, it is rather that the blood is no longer in its proper place.

Question: I believe there is a quote from a chapter of the Ling shu which says that the blood is already formed in the stomach. Is that not right, that the remains of the food turn red?

Elisabeth Rochat: The Ling shu does not say that the blood is formed in the stomach. There is an elaboration of the juices which serve as the basis for blood in the middle heater, but blood is only called xue when it is at the level of the lungs and heart. The stomach is the origin of blood because it provides the material from which it is composed, but blood is not made in the stomach. The red colour comes from the heart, and it is only when it reaches the heart that there is this radical change. References to the blood occur in chapters 18, 30 and 81.

The kidneys are also implicated in the blood because blood is a liquid which is more yin and linked with the jing. The kidneys have a certain function in regard to the blood which is because of their relationship to liquids via the quality of the jing.

Question: In some sources there is talk of marrow producing blood. Does the Nei jing elaborate on how marrow produces blood?

Elisabeth Rochat: Su wen chapter 5 says that marrow gives rise to the liver, and this is through the relationship with the essences, jing, of the kidneys. The jing of the kidneys is implicated in the constitution and in the quality of the blood because of their connection with the original or innate constitution of the being. It is the jing of the kidneys which makes up the marrow. The kidney and liver have this relationship through the sheng cycle, so the easiest way of summing all this up is to say that the marrow gives rise to the liver. But there are no classical Chinese texts which directly link the marrow and the blood.

Question: Don't the kidneys have a role in the quantity of blood as well?

Elisabeth Rochat: Every organ has some effect on the quantity of blood, each according to its different nature. If the stomach and spleen do not have anything to eat then there will not be the quantity of blood, or it will be impoverished. There is never just one organ responsible for one area of life, you cannot say that just one organ is responsible for the blood. For each organic reality there is a crossing of all five movements that make life.

Question: In the classics it mentions that yuan qi from the kidneys is directly involved in the creation of blood in the 5 zang.

Claude Larre: Of course. The kidneys are linked with the ancestors. Yuan qi is the most yuan of all the qi being at the beginning of the being, and it is necessarily involved, just as you are involved and dependent on your father and your grandfather and all your lineage. They are acting right now in yourself, even though you may say they are dead. So the yuan qi, being the origin of anything present in oneself, is necessarily involved in the formation of blood.

Question: You said earlier that food and liquids were transformed in the stomach and rise up to the lungs via tai yin and then go to the heart which puts its stamp on the precious juice by giving it the red colour. So you get a material change in the blood. But in my copy of the Ling shu chapter 30 it says "The Yellow Emperor asked "What is blood?" and Qi Bo replied "When the middle burning space (stomach and spleen) receive food energy it will transform it into red fluid which is called blood." I believe that a lot of our understanding of how to increase blood in treatment refers to this idea.

Elisabeth Rochat: It must be said that chapter 30 is just a summary of a more elaborate development in other places, for example Ling shu chapter 18.

Question: But it does not say there that the colour red is specifically added by the heart. What it says in chapter 30 is that the red fluid comes from the middle jiao.

Elisabeth Rochat: Yes, but the colour red is the colour of the heart, it cannot be the colour of the stomach. Something adds this colour and the colour is the aspect of manifestation of the internal structure and animation. The meaning of the red is that it is something coming from the heart.

Question: But blood can only be produced by the stomach because you have to have the yuan qi coming up from the ming men to help the production. That is the internal fire and the root of the body where fire is manifest.

Claude Larre: When Elisabeth was giving an explanation of the animation of the liquid we call blood she said that it is not made in the stomach but in the heart. But we are not supposed to take this as gospel. It is a question of knowing what is responsible for what, and the single statement which was taken not from the text but from the commentators on chapter 18 is that it is impossible that the red colour and the animation going with it are just the work of the stomach, they have to be the stamp of the heart.

Question: The reason why I make a point of this is because it has come up in other parts of the acupuncture world where it has changed ways of approach in the practical treatment of blood. Some people use heart points such as the yu point of the heart to increase the blood.

Claude Larre: If I am permitted to add one sentence I would just say that the weak point of any teaching is to have an absolute theory of where, when and how things are made and to make that a basis for treatment. If blood is made in the stomach then you only use stomach points. This is utterly false in my opinion. It is impossible to treat just according to theory.

The Liver is Master of all that makes Free Flow and Circulation

Elisabeth Rochat: Another function of the liver is that of making free circulation and flow, allowing everything to penetrate easily and spread everywhere. We can recognise the power of spring in this, and the power of the beginning which is in shao yang to remove all obstacles and create free movement. This circulation is made through spreading and elevation, which is what we saw previously in regard to the spring in Su wen chapter 2. This is taken up again in chapter 18 where each of the 5 zang is discussed in the context of its own movement in relation to the storing of what is real and authentic, of what is most deep in a being and which makes them an individual. The movement of the liver is that of diffusion, which is expressed particularly through the muscles, but also through all the connective tissues in the body, all the fascia.

So the great tendency of the qi of the liver is to spread out everywhere, ensuring that good circulation is created everywhere because the first impulse is given with sufficient strength. But this has to be differentiated from the function of the heart which has mastery over all the life-giving network, the mai.

It should also be contrasted with the function of the lungs which are involved with the rhythm that is given to this circulation. You have to make a very close connection between the function of the liver spreading out and springing up, and the function of ascending and descending in the body which is linked with all the zang and fu. For example, the lungs make the qi and liquids descend, while the bladder and kidneys act as a foundation for the rising up of qi and jing. Obviously the central mechanism of the stomach and spleen directs elevation and descent, and is itself kept in balance by the wood element and the liver's movement of free circulation.

The Liver and Emotions

Elisabeth Rochat: The loss of the liver's function of making free flow has repercussions on the circulation of qi, particularly on the movement of raising and lowering. But one of the greatest manifestations of this function in the body is free circulation in regard to the emotions. The ideogram for emotion, qing, is composed of two parts, the heart on the left side and qing, the natural green colour, on the right. This indicates that the same liveliness and vivacity which manifest in springtime and in the east, when related to the realm of the heart gives us the ideogram we translate as emotion. It is because of this that the liver is given a great place in the governing of the emotions. What is important about emotions is not whether they exist or not, there are always different movements which we call fear or anger or whatever, but whether they are in balance and harmony, and whether they are in free circulation. Nothing should block them. If an emotion is blocked then the qi which forms the emotion will become pathological. Emotions are nothing more than the expression of qi, and when that is obstructed it will give rise to feelings which are not normal.

This particular responsibility of the liver for the emotions also comes from the fact that the liver stores the hun, the spirits which are closest to the shen, and therefore linked with the higher aspects of the mental and emotional sphere.

In addition to all this each zang has a particular expression in the realm of the emotions by which the qi that constitutes a zang also constitutes the same movement in the realm of emotions. For the liver its quality of springing up and spreading out gives it an impetuosity which when it becomes pathological is excessive anger. Anger takes someone over and carries the qi upwards in the body, it makes you lose control of yourself. All this has repercussions on the hun and the storage of blood. When anger is very strong and the fire within the anger is very powerful, then the blood and all its constituents are impoverished. There is a drying up of the blood and at that time the hun no longer have a proper residence and they become dissipated.

There is a warning given in many classical texts that you have to be careful if you are nourishing or relaxing the liver that you do not release anger. Certain commentators go even further than this and say it is better to tonify the kidneys, which will have a secondary effect of tonifying the liver, rather than tonifying the liver directly.

On the other hand states which we might think are physical can also have an effect on the emotions. For example, if there is too much richness in the constituents that form the blood then this can bring about a tendency to anger. If there is an emptiness in the blood, then there will be an emptiness in the liver and gallbladder and there will be a tendency to be fearful. If there is an emptiness in the qi of the liver then there is an emptiness in the qi which gives the ability to push outward and forward in life. The result is that there is a kind of recoiling which takes the form of fear. So the harmony between the blood and qi, between the yin and yang within the liver is necessary to ensure the free circulation of the qi which forms the emotions.

Two different emotions affect the liver most, when someone is too excited or is very depressed. When the liver qi can no longer ensure this free circulation it is obstructed or knotted. It does not flow smoothly and the person becomes oppressed and joyless, suspicious of others and mistrustful. If you

want to put that into a 5 element framework it is the lung qi and its sadness which submerges the emotion of the liver.

Claude Larre: This feeling of sadness is proper to autumn. There is less light in the sky, your summer vacation is behind you, and work is starting again. All that gives some kind of distress or oppression, and might be able to block that flux of energy and vitality and joy which is more proper for the liver.

Elisabeth Rochat: On the other hand the thought and reflection which are linked to the earth element can come across the reverse ke cycle and attack the liver. If the liver no longer has the ability to conceive of things and to transform thoughts and reflections into plans, then you are just left going round and round with the same thoughts. At the same time you can also observe swellings, blockages and obstructions in the region of the ribs and thorax.

When the blockage of the qi becomes very serious you can fall into a very profound depression, with constant weeping. The blockage which you can see in the emotions is also seen in the circulation of qi and blood, and has physical repercussions, such as dysmenorrhoea in a woman, for example.

The reverse case is over excitement, when the qi of the liver gets out of control and you have signs of agitation and disturbance. The person becomes anxious and agitated, is easily angered, and this can lead to insomnia and to lots of dreams if there is an effect on the hun. Being carried away like this can give trouble in the region of head, for example blurred vision and vertigo, or noises in the ears which can become so bad that they can cause deafness. Being carried away like this the fire of the liver rises up and affects the head and brain, and the eye and ear are implicated. The liver meridian passes over the head and through the brain to du mai 20, and the gallbladder meridian also goes over the head.

Blood Circulation

Elisabeth Rochat: Blood and qi are inseparable. The image which is often given in Chinese is that of a person and their shadow. When the qi circulates the blood circulates, and when the qi is blocked the blood is blocked. When the qi of the liver is attacked the blood of the liver is attacked and if the qi of the liver is injured then it will affect the blood and vice versa. So a bad circulation of liver qi will have great repercussions on the liver's function of storing the blood in two different ways. First, if there is a blockage and the qi cannot circulate freely then neither can the blood, and this can lead to sharp pains in the thorax and sides or to dysmenorrhoea. It can go further to produce stagnation and extravasation, with blood clots, tangible masses or amenorrhoea. On the other hand if there is too much circulation then the blood will be carried away with it and carried upwards because of the upward movement of the liver. Then the face and eyes become red, and in serious cases there can be bleeding from the nose or vomiting of blood.

There can also be a third situation which is a complete disorder in the circulation of the liver qi when the blood is no longer kept in its place of reserve, all of which can manifest as haemorrhages. When you have this situation of obstruction in the free flow of the liver, it produces a heat which can evolve into fire. This heat and fire seek to move and this can be one of the causes of what is called internal wind.

Digestion and Absorption

Elisabeth Rochat: The function of the liver to allow free circulation is important in the help that it gives to digestion and absorption. The movement of the liver in making things flow is very helpful for the stomach and spleen in their role of ascending and descending. It also helps the gallbladder with the emission of bile. In fact the free circulation of qi under the impulse from the liver is one of the essential conditions for normal digestion and assimilation. If this does not happen you can have disturbance in the raising and lowering of the stomach and spleen such as belching and eructations because the stomach qi is not lowered properly, or swelling of the abdomen because the spleen qi is not raised properly.

Relationship with the Triple Heater

Elisabeth Rochat: Beyond the links between the liver and the middle heater, this function of the liver to make free circulation and flow is concerned with the three heaters since it is a question of the good regulation of all the mechanisms of qi. The circulation of qi also has an effect on the circulation of liquids, and has to see that this is correct too.

For example, you could have a case of oedema or blockage by water which will come under the general framework of the triple heater, but where you might have to look to the liver for the cause. Here again we find the action of shao yang which unites the gallbladder and triple heater and has this function of pushing to the front and making everything circulate everywhere.

The circulation of everything which makes for free flow must occur with great ease and fluidity. It is for this reason that we can say that in its deepest nature the liver is yin while all the effects that spring from it have a yang nature. When there is complete harmony in the liver there will be an invigoration of the qi which with the firm basis of the jing and blood springs up and spreads throughout the whole organism to bring life to every element in the body.

The Liver in relation to Right and Left

Elisabeth Rochat: In Su wen chapter 52 it is said that the liver gives life by the left. In other texts it says that its treatment is by the left. We know that the liver is situated on the right hand side in the yin part of the body, but it is always related to the left side because its movement always goes towards the left. In other words from the basis of the yin the effect will be yang. This will be understood by those who do tai qi quan. When you want to do a movement that goes towards the right you never do it directly, it is always necessary to begin with a movement of leaning towards the left first, and then you can go towards the right with all the power of that movement.

In certain contexts it is said that the right hand side of the body is yin in relation to the left. The venous system goes on the right side and the arterial system goes in on the left. The heart which moves is more on the left side while the liver which stores is more on the right side. If you want to bring out a gesture, a movement or an effect, it must always be initiated on the opposite side. The liver stores the blood by regulating its quantity. It is therefore apparently located in the yin on the right side. All the movements that come from it are initiated on the right but have their effect on the left. So when you want to treat the liver for anything connected with its relationship with the qi then you

might prefer to treat on the left side. On the other hand, the left (when one is facing south) is the place of the rising sun, opposed to the west, the place of the setting sun. So, the left symbolises the rising movement and the right the descending one.

Claude Larre: It is more a question of the movement between two things than a question of right and left. This is not the case in western books of medicine where first a description is given to tell you where it is, and then later it is put in motion and the physiology starts. This is the distinction made by western medicine between anatomy and physiology which is a separation characterizing that sort of medicine. The Chinese observe phenomena, and what they observe is always changing, so they are interested in the movement. They are interested in what is in the middle, in the void, because it is in that void that movement is possible.

Muscular Forces, jin

Elisabeth Rochat: A more tangible and visible expression of the qi of the liver is in the muscular force, all the system of connections between the flesh and bones. It is this which allows articulations to move and enables precise movements to be made. It is also its strength which allows to you pick up objects with precision.

There is something called zong jin which is translated as ancestral muscle. It means that all the muscles have a principle of direction and co-ordination and a gathering together in the same way that the ancestor gathers together the whole family. All the members of a family can be united in the same state of mind if the ancestor has a strong personality. The zong jin is located in the perineum and commands everything which is connected with the muscular forces in the body. The region of the perineum is important because it is there that the movement which exemplifies vital force is found, a man's erection. An erection has the movement of straightening and pushing upwards which is precisely the movement of life. The erection is only one aspect of reproduction, and only one aspect of everything which is concerned with muscular forces, but it is a very good correspondence and representation.

According to Su wen chapter 44 zong jin has mastery over bones which are joined to one another, which is one way of referring to the vertebral column. The bones have to be well connected to function properly with the possibility of movement, and in particular bending and straightening in the same way that wood does. The spine also permits all other movements in the body.

The supply of qi and blood are equally necessary for the good functioning of the muscles. The mastery of the liver over the muscular forces is connected with its functions of allowing free flow of qi and storing the blood because it is through the nutritive power of blood that all movements and activities are possible. Movements which are too violent and impetuous will exhaust this function of the liver, as can be seen in Su wen chapters 4 and 9. When the liver no longer assumes its command over the muscular forces if it is linked to an insufficiency of blood in the liver, the blood is no longer nourishing the muscles and you see symptoms such as trembling, often in hands and feet, leading in extreme cases to paralysis of the limbs and greater and greater difficulty in using the joints. Bending and straightening no longer take place. If heat is added to this state it damages the body fluids and dries them up, further diminishing the quality of the blood. There could then be more violent

symptoms such as spasms or cramps, episthotonos when the back is bent over or trismus, lockjaw. All these symptoms will also be linked to liver wind. Liver wind brings a certain violence and speed to these symptoms.

Nails

Elisabeth Rochat: What are nails? Muscles have the same qi as the qi of the liver, but are expressed inside the body. You cannot see them, but you feel them and you can see their effects. As this qi pushes further and further towards the exterior it forms what we call the nails. These are visible on the outside, and for this reason Su wen chapter 9 says 'its flourishing aspect is in the nails'. It is the same qi that creates the liver and which is expressed in the muscles, and which finishes this movement of pushing to the exterior by forming nails. It is because of this that you can form conclusions about the state of the liver by looking at the nails. When the liver is working well the nails will be well nourished by the flow of blood and shining with health. They will be firm but also supple. Conversely when the liver is not in a good state of health the nails will be thin and soft. Soft is not the same as supple. They will be very brittle and easily split. They will have a fibrous aspect and be ridged.

Eyes

Elisabeth Rochat: We have seen that the liver opens its orifice at the eye, so the power of its qi comes out there. This allows you to see into the distance. It is the same expression of the qi as in its ability to spring up with vitality. Good vision has its root in the irrigation and nutrition of the blood and qi of the liver, and it is their harmony which allows us to distinguish the 5 colours. It says in Ling shu chapter 17 'you can correctly grasp all the aspects presented on the outside of things', which is what we saw previously in regard to the aspect, se, and the idea of grasping the exterior aspect of beings. So anomalies in the functioning of the liver will have repercussions in the eye and in vision. Insufficiency of the yin of the liver or the blood of the liver will make the eyes dry, blur the sight or cause night blindness. With wind and heat in the liver you have blurred vision and vertigo or strabismus.

The Heavenly Stems, jia yi

Question: Can you please explain a little about the characters for jia and yi which are the first two heavenly stems and which are connected with the liver and gallbladder?

Elisabeth Rochat: In the Yue ling, the monthly commandments, which is part of the Book of Rites we find it said that the names most suitable to the days of spring are jia yi. That is to say there is in these names something that is very similar to the movement of spring.

Jia is the idea of a very hard tree bark, of scale and of armour. The traditional Chinese etymology for this ideogram is the image of a helmet on the head of a big man. It is the idea of something that envelops and at the same time protects. Like a tortoise shell. It also has the meaning of the claws of a bird, its talons. It is the sense of gripping something very tightly in order that something can come out of it, there is very great strength in that protection.

In the second character, yi, there is the idea of the seed of a plant which makes an effort to come out from the earth, piercing the surface. In this ideogram there is a notion of effort and impulse. So the meaning of both these ideograms is to burst out, open up, to germinate, spread out and diffuse. There is very great strength which is turned towards protection, but which is also capable of piercing through this protection in order to spring up.

Claude Larre: In addition to that we have to understand the relationship between jia and yi. Jia yi is the movement of life as it bursts out from the chaos.

Elisabeth Rochat: There is a classical text called the Jiayi jing which is the first attempt at an ordered classification of all the data given in the Nei jing. Here the meaning is 'The ABC of Acupuncture and Moxibustion'. Jia, yi and the other heavenly stems are often used in this way, to express all kinds of series, such as A, B, C, 1, 2, 3 etc.

In the movement manifested by jia yi there is all the strength of the wind which brings the thawing after winter. There is the idea of the animals which were hibernating just beginning to move and the fish which were at the bottom of the river coming back up to the surface. It is the moment of coming together again of heaven and earth after the separation of winter. Once again the qi of heaven can descend and the qi of earth can ascend.

Jue Yin

It is through all this that we can understand what jue yin is. In the ideogram jue there is a double idea. On the left, inside the character, there is vegetation which is pushing up (Wieger Lesson 102D) with the horizontal stroke indicating resistance and an obstacle to overcome. If you combine this with the radical for walking you have the ideogram ni meaning countercurrent. The part of the character on the right has the idea of respiration or breathing which is blocked, and therefore contains the idea of suffocation. So in jue there is a sense of an obstacle to cross or a current which is inverted.

Related to yin, it is as if the yin has come to the end of itself and has come to the beginning of yang. It is just like when you have gone right through the night and you are at the moment when dawn is about to break, or when in winter the water is frozen and earth is hard, and they no longer seem to receive the warmth of the sun, then the opposite movement seems to begin at that point. In the depths of this situation which is winter, there is the seed which is capable of continuing its movement and breaking out and letting the circulation flow freely. So we can see quite well how jue yin is very suitable for the liver and how it is rooted in water, in the kidneys and winter, which represent the basis from which the impulse can be started.

CAUSES OF DISEASE IN THE LIVER

Wind

Elisabeth Rochat: One of the principle attacks from the exterior is wind. Wind breaks up the connection between the ying qi and wei qi which increases the agitation and disturbance of the movement. Wind by its nature makes things rise, and will therefore provoke the functions of the liver and create something which goes too far. It induces an over-reaching in the rising and circulating movements which are those of the liver.

Wind is amongst the perverse evils, and the one that can combine most easily with the others. It has a yang nature and can combine with fire or heat, both of which have a similar nature to wind itself. In this case there will be a movement of agitation and an exaggerated rising upwards. One of the greatest repercussions is obviously in the realm of yin, blood and body fluids. Wind can also combine with cold or with damp, and then it produces blockage and obstruction, cold being that which freezes and hinders free circulation. In that case there will be both agitation and disturbance from the wind and also obstructions preventing free circulation.

Wind can also combine with dryness, and in this instance you can distinguish two possibilities. With a warm nature it has a destructive effect on the interstitial fluids and all the body liquids. There will just be a kind of vapour which evaporates and diffuses. In this case we find symptoms of elevation, circulation, movement, impediment and impoverishment of the jin ye, the bodily fluids. With dryness linked with cold there will be symptoms more on the side of blockage in the circulation and bad distribution of all liquids. These are very difficult to distinguish because they are very intricate, but there are symptoms that can be differentiated.

Emotions

Elisabeth Rochat: We have seen that the 7 emotions injure the liver, and in particular anger which makes the qi rise up to the top. Anger is something that excites all the movements of the liver and which has many repercussions. It can cause swellings in the thorax or affect the stomach and spleen. For example, in Su wen chapter 39 it says that when there is anger the qi reverses its normal flow and runs countercurrent. When this is very strong and intense it can produce vomiting of blood or diarrhoea with undigested food. If anger introduces complete disorder and reverses the normal storing of the blood by the liver some texts indicate that there is a strong possibility of uterine haemorrhage. Anger can come from an external situation or from a more internal cause. Other emotions can also injure the liver such as fear, which makes the qi descend preventing its circulation. The jing turns in on itself. If there is a break between the different stages within the three heaters, then we can understand how the functions of the liver, which are to make things circulate and spread out, and to make things rise, gets into difficulty since they are contradicted by this emotion of fear which draws downwards and blocks below. We could also see that the kidneys are injured by this fear, so it is only with difficulty that they can serve as a basis and foundation for the liver and all the starting up of life.

If there is the emotion of grief or oppression, you, one no longer feels full of joy and liveliness. One is turned in on oneself without the possibility of opening up. The character shows the heart in the middle being squeezed in a vice between the top and bottom parts. The natural movement of this emotion is therefore the opposite to that which the liver makes in circulating things and spreading out. If this state of oppression lasts a long time then there will be a break in the relationship between the liver and the middle heater. For this reason, little by little the person would no longer have any desire to eat or drink, and there could be swelling in the sides and thoracic regions.

There is another emotion which can injure the liver, and that is fright, jing, which is usually linked to the heart and to xin bao lu (which is also linked to the liver via jue yin). When there is this

movement of fright then there is a loss of communication with the heart, a disorder in the functioning of the heart as master and in the communication that it has to have with all the other zang to give them the light of the shen. This affects the hun of the liver and can cause bursts of rage, insomnia, and disordered dreams. The liver loses its function of being able to conceive plans and assess circumstances, and there is disorder in the shen. Here you can see quite clearly the relationship of jue yin between the liver and xin bao lu. You can also see the communication of the liver with the eye and brain.

Claude Larre: We understand that the rest period during the night is the time for the hun to communicate with the heart, and this generates a state of stability and clarity, even if there are dreams during that time. In the morning when you come back to your senses the basis for the use of those senses relies on the rest of the night. The new energy which comes to life each morning is only possible because the night has been full of communication between the hun and the heart.

Alcohol

Elisabeth Rochat: Alcohol is something humid, damp and also warm. It is something that disturbs the realm of consciousness and the emotions, which makes your head turn and makes you vomit. We find these symptoms in the actions of the liver and in the effects of the liver on the spleen. In the Nei jing you find it said two or three times that alcohol is referred to in relationship with the liver and gallbladder.

Sexual Excess

Elisabeth Rochat: Sexual excess can also injure the liver, because although the attack is made directly on the kidneys, the deterioration in the kidneys will be felt by the liver. The liver loses that which nourishes it, and if the jing of the kidneys deteriorates and the liver blood is no longer sufficient or of good enough quality to retain the impulse of the liver to go upwards, then this is called an excess of liver yang caused by an emptiness. In this case we find symptoms such as hypertension, with its origin in kidney emptiness.

LIVER FUNCTIONS AND RELATED SYMPTOMATOLOGY

Pushing upward and surging up, sheng fa

Elisabeth Rochat: When this is in excess then the qi and blood will be brought up to the top of the body as if by a current of great strength. Then the parts of the body which will be affected are at the top, in the region of the head, and in the middle. This will often indicate that wind is present. You can have pains in the head, blurred vision, and sometimes swelling. In the middle region you can have pains in the thorax and sides. If this excessive rising up manages to injure the descending function proper to the stomach then you have symptoms such as vomiting. If in addition there is such a great strength in this pushing upward that it makes the liver lose its function of storing the blood then there will be blood in the vomit or spitting of blood.

If, on the other hand, this function is deficient there will be difficulties in the qi and blood rising and diffusing everywhere. In that case there will be symptoms indicating the lack of supply of qi and

blood to the head, such as dizziness on getting up from lying or sitting, and pains in the head which are relieved by pressure. This deficiency can also cause swellings which are intermittent.

Free circulation and flow, shu xie

Elisabeth Rochat: When this aspect is in excess symptoms will be more visible in the middle and lower parts of the body. Illnesses such as xiao ke, which is often translated as diabetes, where the principal symptoms are great thirst and frequent urination can arise. There can be sudden diarrhoea with a pressure in the lower abdomen, and some kind of tenesmus. For women, since the blood is no longer stored because of too much circulation and flow, the quantity of blood during a period will be abundant, and the period can even come too early. In serious cases this can lead to a uterine haemorrhage.

When this function of free circulation and flow is deficient then you can have a pain in the thorax with a sensation of oppression within all the cavities of the middle region due to lack of circulation. The person may try to regain the circulation by sighing and deep breathing. In the lower part of the body there can be anuria, and some kinds of blockage with violent pains in the lower leg. In gynaecology it is the opposite picture to the one for excess circulation: the period comes late and there is a tendency for there to be less blood. There can also be clots which are lumps and obstructions and therefore cause pain.

Motion and shaking, dong yao

Elisabeth Rochat: When this is too strong the attacks will be on the jin mai, the vital life-giving network which brings the qi, blood, nourishment and irrigation to all the tendons and ligaments, and which permits movement of the joints. The liver governs all this movement, and should keep it within limits, but when there is too great a force moving through the jin mai then the strength of this movement in the form of wind will cause disordered and abnormal movements. In this situation you can have all kinds of nervous ticks and twitches. You see people who are always shaking or moving their heads, who have Bell's Palsy or facial spasms. There can be blurred vision as well. These are all symptoms that arise from disturbance in the jin mai.

When this function of motion and shaking is deficient then you have muscular contractions because the supply of nutrition through the jin mai is insufficient. Because of the absence of this irrigation you have cramps, spasms and muscular contractions which can reach the point of paralysis if the lack of nutrition lasts a long time. You could also have Bell's Palsy from deficiency because in this case a secondary sort of wind could arise from the emptiness of body fluids. If this situation persists then a yin deficiency can occur leading to a destruction of the person's shen due to the resulting heat. It destroys the shen and the hun and the relationship between them, so there is no longer any peace. In very serious cases this can reach a point of unconsciousness, or mental disturbance where people no longer know what they are doing or saying. The direction in the mental sphere which should be given by the liver and gallbladder is no longer there.

Whether there is excess or deficiency in motion and shaking, both will finally lead to a situation of internal wind and consequent agitation and disturbance. When it is too strong the action is more

direct, and there are different kinds of ticks and twitches, with the agitation seen on the outside quite visibly, particularly at the top of the body on the head. When it is too deficient the circulation and irrigation of the jin mai is insufficient. From this there is an attack on the function of the muscular forces because nutrition is lacking. This emptiness leads to a secondary effect like the wind which produces movements of shaking in the hands, or heat which disturbs the spirits and speech. Since it springs from a weakness in the liver this then prevents the good functioning of the hun, and the good analysis of circumstances and correct behaviour.

Blurred vision

Elisabeth Rochat: In vertigo with blurred vision there can be two different causes which are linked to the liver. It can be a symptom of the fullness of the yang of the liver, where the liver wind rises upward causing trouble in the vision. In this case you have a head which turns and there may even be swellings in the head area and a buzzing in the ears which is like the noise made by the sea's tide. At the same time when you examine the urine you will see that it is yellow, indicating the presence of heat. The eyes will be red and the mouth will have a bitter taste, while the tongue will be red with a yellow coating. There may be agitation with a tendency to anger.

The second cause of blurred vision is emptiness of the blood of the liver. In this case you have the same vertigo and dizziness, and also perhaps the swelling, but the buzzing in the ears is like the song of crickets, with variations in the intensity. At the same time you can have swellings in the sides and thorax.

Headaches

Elisabeth Rochat: When headaches are caused by an interior attack on the liver they will begin slowly and intermittently. There are several categories within this division, for example when the qi of the liver or gallbladder meridian is blocked there will be headaches which are mostly one-sided or in the region just above the eyebrows. In this instance you can still sometimes observe swelling in the thorax and sides.

If the headaches are caused by the liver yang rising too strongly, for example if the supply of liquids to the liver is insufficient, then you will have vertigo and blurred vision along with a buzzing in the ears accompanying this type of headache. If it is not just the yang of the liver which rises due to the fire, this is one stage worse, and the difference is that the fire disturbs what is pure and makes the body fluids unclear. For example, in the region of the middle heater there will be the formation of phlegm. For this reason you have uneasiness and discomfort in the heart region. You also have symptoms of fire such as red eyes, bitterness in the mouth, a tendency to anger and yellow urine. At the level of the head there will not just be headaches but disturbance of the orifices and of the body fluids which should irrigate and nourish them.

With headaches which come from cold entering the jue yin you have a pain right at the vertex of the head, at the highest point that the meridian of jue yin reaches in the region of du mai 20. There are also symptoms of cold present, such as clear vomit or saliva. The Chinese classics describe the pulse when there is cold in the jue yin as lax or without tension. There will also be buzzing in the ears.

When tinnitus is a symptom of fullness, for example when liver fire is the cause, there is a brutality about it, and there is a sudden starting in the sound like a tide. On the other hand when buzzing in the ears is caused by emptiness due to insufficiency of kidney yin which is therefore unable to correctly nourish the liver, there is a secondary phenomenon of disharmony between the yang of the liver and the blood of the liver. The yang rises and causes the buzzing in the ears, and the blood and essences of the liver do not reach the right place in order to irrigate the brain and inner ear. The onset of this will be slower, and you have an intermittent noise described as being like cicadas.

Menstruation

Elisabeth Rochat: The liver stores the blood. Therefore when the liver blood is deficient the quantity of blood in the period diminishes. It is also said that the colour of the blood changes and becomes paler. In serious cases this can lead to amenorrhoea.

A second point is that the liver commands the circulation and free flow, and it is this function which makes the storing of blood all the more important. The liver therefore controls both the storing and the giving out, and when the liver qi is blocked or obstructed then there ceases to be normal circulation, and this can cause irregularity in the period. Either it is too early or too late, or the amount of blood lost is disturbed. If this blockage becomes very serious it can end up creating heat and eventually fire from the internal agitation. The fire exerts a pressure on the blood and its circulation making it irregular and erratic. For example, there can be a lot of very red blood lost in the period.

Wood and Metal

Question: We have seen the liver in its relationship to the kidneys and how the liver can go across the ke cycle to affect the stomach and spleen, but we have not talked about how metal affects wood.

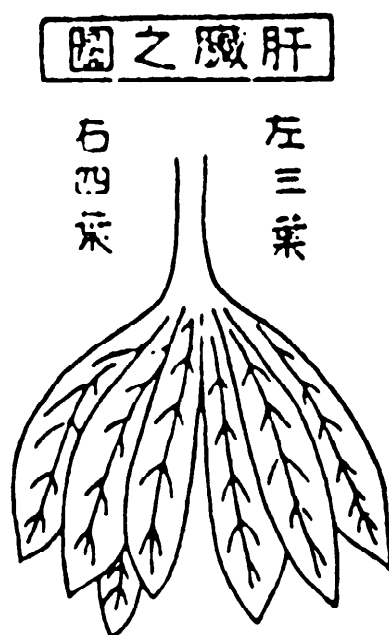
Elisabeth Rochat: The first thing to say is that in the emotions which affect the liver we saw that the emotion of grief and oppression, which is the emotion proper to metal and the lungs, was very important. The emotion you has a movement which is the same as that of metal and autumn and the lungs, it collects, gathers together and goes towards concentration. If this movement is too strong it will hinder the opposing movement of the liver. But, on the other hand it will also perfectly balance too great an expansion of outward movement by the liver which could go on expanding indefinitely. In a living person life is a crossing of these two great movements of springing up and spreading out and gathering in and collecting. In the five movements which create life in the human being and which maintain this life continually, these two great movements which are linked to the liver and to the lungs represent the two great poles of activity. So one can see how they balance each other and how in the case of disturbance there is disharmony and imbalance.

Question: Could you explain more about the physical effect of this control?

Elisabeth Rochat: The physical effect is made through the lungs, because the lungs are the master of qi. It is also seen in the relationship between the liver and the breath and its rhythm which are controlled by the lungs. This relationship is an important aspect of the physiology and therefore of the pathology. A weakness in the lung qi will have repercussions on the liver qi because it will no longer have what is necessary to express itself.

Question: If the metal does not control the wood then the liver fire rises, so is this the reverse ke cycle?

Elisabeth Rochat: If there is a weakness in metal there is a weakness in the qi. Then there is a lack of efficiency in the springing up of the liver. On the other hand you can have pathological repercussions from the liver onto the lungs. For example, if the liver qi is obstructed then this creates fire, and that rises up and seriously injures the lungs. What comes out of this is that the lungs will have lost one of their principal functions which is to clarify and refresh, and to exert a pressure so that things can descend. This is a reverse ke cycle, with a pathological effect of the liver affecting the functioning of the lungs with symptoms from the lungs and liver mixed together. For example, you could have coughing, or coughing with blood, pains in the sides and thorax, painful red eyes and a tendency to anger.



SOME DETAILS OF LIVER AND GALLBLADDER SYNDROMES

肝
氣
郁
結

**Liver qi obstructed and knotted,
gan qi yu jie**

Elisabeth Rochat: When the liver qi is in a state of obstruction or blockage it can form knots, which means that it cannot spread out correctly. There are five principal categories within this.

1) Blockage of the liver qi within the liver meridian itself

The symptoms here are swelling and pain in the region of the ribs, with pains that can be very deep inside and cannot be located exactly. There is oppression in the region of the thorax, with a tendency to take deep breaths in order to free the sensation of stagnation. For women there can be swollen or painful breasts and irregular periods.

The cause of this could be that the emotions have become imbalanced and no longer enjoy free circulation and harmony. There will be a tendency to anger in this case. There are also repercussions on the pathway of the meridian in the region of the ribs and thorax, and the sensation of oppression. This is particularly present in the thorax because this area is very much involved in the free circulation of the emotions.

When the liver qi loses its free circulation then the blood can no longer circulate freely either. It is because of this that you have irregularity in menstruation because of the effect on the functioning of chong and ren mai. Chong and ren mai and the liver are very much involved in the good circulation of blood, particularly in the lower heater.

2) Phlegm and qi cause obstructions and knots

Another aspect of this stagnation of the liver qi can be the sensation of having an obstruction in the throat or pharynx, such that you have problems swallowing. It is sometimes called 'globus hystericus'. There is an obstruction at the level of the throat so that the qi cannot flow freely through the region of the neck. What has happened here is that the blockage of the liver qi has had repercussions on the functions of the spleen and stomach, and in particular on the spleen's ability to transport and transform, and this has led to the formation of phlegm. If the spleen is not strong enough to transport and transform then there arises a humid, damp stagnation, and added to the obstruction of the liver qi already present it creates phlegm.

3) Liver obstructed, qi blocked, blood stagnation

In this case as well as the familiar symptoms of liver qi stagnation you will have a darkened complexion, and there can be a tendency to emaciation. In the ribs which are congested and swollen you may also get sharp pains. The liver and spleen will be swollen and the tongue could be dark red or purple, and the sides of the tongue could appear bruised, which is a sign of stagnation. This happens when the blockage of liver qi has been present for a long time and there has been such a slowing down in the flow of blood that it has led to an actual stoppage.

4) Liver qi attacks the stomach

In addition to all the usual symptoms of liver qi stagnation you have specific pain and swelling in the stomach area. There will also be a tendency to eat less, to have hiccups, eructations or even acid regurgitation because of the weakening of the function of the stomach. The cause of all this is that the blockage in the liver qi leads to a blockage in the stomach cavity, and that is why you get pain and swelling there. This is called a transverse counter-current.

5) Liver qi attacks the spleen

If the blockage in the liver qi attacks the spleen then apart from all the expected symptoms you can also get symptoms connected with the spleen such as swelling and pain in the abdomen, gurgling in the intestines and diarrhoea. If you look at the tongue you can often see that it is white and greasy. This is called the wood over-riding the earth, and it means that the spleen loses its ability to transform and transport. It can no longer conserve and raise the qi and that gives rise to the swelling and congestion in the abdomen. The diarrhoea comes from the loss of the function of processing and transforming food correctly, and the inability to control the humidity of the body. In diarrhoea the function of raising things up is completely lost!

When the earth is weak you can also have a deficiency of liver blood because there is an insufficient supply of the materials necessary to renew the essences of the middle heater which go to create blood.

肝經實火
肝火上炎

**Liver fire blazes upwards,
gan huo shang yan,
or Full fire in the liver meridian,
gan jing shi huo**

Elisabeth Rochat: This is a fullness of fire in the liver meridian, and in this case you have symptoms such as headaches, blurred vision, vertigo, buzzing in the ears, agitation, tendency to anger, and red face. The pain in the ribs will be burning, and there can be a dryness and bitter taste in the mouth.

If these symptoms get worse you can have spitting or vomiting of blood or nosebleed. The urine will be yellow and there can be constipation. There can be quite acute pathology with this situation.

肝膽濕熱

**Damp heat in the liver and gallbladder,
gan dan shi re**

Elisabeth Rochat: This can come from the spleen, so is a pathology which we often see with the spleen, in particular with the appearance of a certain kind of jaundice. There will be congestion linked with the meridians of the liver and gallbladder, and there may be swelling and pain in the thorax and sides. In the lower jiao a man may have swollen, painful testicles and a woman may have a yellow, foul-smelling discharge or pruritis.

寒滯肝脈

Cold blocks the liver network, han zhi gan mai

Elisabeth Rochat: The only time cold attacks the liver is by blocking the life-giving network by which the liver can make things circulate. This is especially so in the lower abdomen where the symptoms start off, for example in connection with certain functions of ren mai.

As you know the liver meridian encircles and goes through the genital region, and is the meridian which is principally concerned with this area. So the lower abdomen will be painful and swollen, the testicles are not held in place properly and tend to be lowered. They will also have a sensation of cold, with a contraction at the level of the scrotum, all of which is caused by cold invading the liver meridian.

肝風內動

Liver wind moves inside, gan feng nei dong

Elisabeth Rochat: When we speak of wind in the liver we mean internal wind, which is to say the disorder which leads to cramps, muscular contractions, trembling, numbness and paralysis. There are three different causes for this wind:

1) Liver yang transforms into wind

This is when the yang of the liver is too strong, often because of a deficiency in the yin. With this you get blurred vision, vertigo, dizziness, headache with the feeling of an iron band around the head, numbness and trembling, difficulty speaking and walking. When this is pushed to an extreme you can have apoplexy with a stiff tongue and the mouth and eye deviated. You can have hemiplegia following this kind of attack by wind. It often comes from the deficiency of yin leading to the fire which disturbs the upper parts of the body. The wind and fire are carried upwards and that is why you get vertigo and headaches, and even difficulties in movement and speech. There is no longer any mastery of movement, and this can be linked to the functioning of the gallbladder which in one part of the Su wen is linked particularly to speech and to that part of the throat.

On the other hand if the movement of the wind cramps the muscles there is no longer the flexibility that is necessary for the formation of words. If all the strength of the body and the qi is carried towards the top because the base and the yin is out of balance and is insufficient to pull it downwards, then there will be symptoms of emptiness in the lower part of the body, such as not being able to

walk properly. In addition the fire which is disturbed by the wind will burn up the interstitial fluids, producing phlegm. This will affect the head and orifices of the face, where only the more pure and clear essences should be found.

Following this there can also be a sudden loss of consciousness. If the phlegm flows in the pathways of qi this can create terrible disorder, reversing the current's flow and ending in facial distortion and possible hemiplegia with a sudden and violent onset due to the blockage of circulation in one part of the body. In the end there can be cerebral vascular attacks, strokes and so on.

2) Extreme heat produces wind

The second possibility for the production of internal wind is by heat which has reached an extreme, with high fever and great thirst. The person will be disturbed and agitated, with cramps in the limbs and a stiffening of the neck. The muscles of the back and neck will be attacked and arched backwards, the tongue is deviated and agitated by trembling, and there is confusion of consciousness and even delirium. This heat attacks all the systems by which the liver maintains its relations, and of course has a direct effect on the xin bao luo, the network of relationships around the heart which has a special link with the liver. At this point the spirits of the heart can no longer radiate as they should, and the unity and wisdom of the person is damaged giving the symptoms of disturbance. There is a barrier which prevents the shen communicating with the interior and which leads to great confusion in them and in the mind, and it is this which can lead to loss of consciousness.

The heat has a definite effect on all the body fluids which leads to fever and thirst, and as the heat goes deeper and deeper it injures the pathway of the body fluids which should irrigate the muscles leading to the symptoms of cramping and stiffening of the muscles. The muscles and the jin mai lose their nutrition and are subjected to the action of the wind which puts them into spasms and cramps. This can lead to all kinds of different symptoms such as convulsions.

3) Emptiness of blood produces wind

The third manner by which liver wind is produced is from an emptiness of blood. Here again you have the head which turns and the vision which is blurred. The complexion will be sallow and withered, and the tongue is often pale with very little coating. The forearms can be numb or you can have sudden and violent cramps, especially in the hands and feet. It is this lack of irrigation which makes the limbs feel impotent, and the absence of liquid support produces the rising up of wind which leads to very sudden and violent cramps. The hands and feet are particularly prone because they are at the end of the pathways of irrigation so it is there that the deficiency is most clearly seen. The cause of this deficiency of the liver blood can be in the kidneys or the spleen, but the blood can no longer nourish the liver, and therefore the liver can no longer nourish what it is responsible for so you have blurred vision and problems in the jin mai. There is no great rising up of liver yang in this case, rather you have anaemia and chronic illnesses with severe weakening.

肝 陰 虛

Emptiness of liver yin, gan yin xu

The symptoms of emptiness of liver yin can, for greater convenience, be presented in three stages of increasing seriousness.

1) Emptiness of liver blood

The symptoms are dull, lifeless complexion, blurred vision with dizziness; excessive dreaming; buzzing in the ears like cicadas; dry eyes, vision blurred or diminished in the dark; limbs numb or paralysed with spasms in the jin mai, the tendinomusculars which run through and stimulate the musculature; flesh quivering with little shivers; nails dull; small quantity of blood in menstruation or amenorrhea. The tongue is pale and the pulse thin, xi.

The quantity of blood at the body's disposal is small. This situation can arise from a weakness in the production of blood by the spleen and stomach, from a substantial loss of blood or from a long illness. Any of these will mean in the end that the quantity of blood stored by the liver is small. The consequences are seen at various levels in the body where the animating power of the liver is important.

In the face, the blood is not abundant enough to give its radiance to the complexion and ensure its rich colouring; nor is it abundant enough to maintain either the irrigation of the eye, which becomes dry, or the clarity and power of vision of the inner system of the eye, so leading to visual disturbances. The nourishment of the brain, which is rich in essence and yin, is also diminished, leading to vertigo. The liver meridian makes a direct connection with the inner system of the eye, but through its association with the gallbladder meridian, the shao yang of the foot, the ear can also suffer the consequences of the insufficiency of blood. This can lead to noises in the ears, the shrillness indicating the deficiency of blood. One final orifice on the face is affected, the tongue, which is not sufficiently filled with blood to present as a normal red colour and so is pale.

At the extremities of the limbs, the nails, which manifest the muscular force and the inner richness of the liver, are dull since they are poorly nourished. In the layers of the flesh and the pathways which bring them moisture and nutrition, the absence of liver blood gives rise to internal wind. This is responsible for the agitation and quivering of the flesh, muscular spasms and paralysis through blockage due to the erratic movements of the wind.

In the woman's abdomen, the liver can no longer provide enough liquid for her periods.

At night, the blood is not sufficient enough to keep the hun in their place to control and balance their power of flight and imagination, leading to excessive and doubtless rather agitated dreaming.

The blood which is not available for the liver is also lacking in the whole network of animation, the mai. This is shown in the pulse, mai, which is thin, xi.

All treatment will aim to increase and tonify the liver blood.

2) Emptiness of liver yin

In addition to the symptoms given above for emptiness of liver blood, there is an aggravation in the form of internal heat. This internal heat is a result of the empty yin. It manifests, most often, as a redness in the cheeks, 'robber sweats' (night time sweating that stops on awakening), insomnia, agitation and malaise in the cardiac region, untimely sweats.

The tongue is red with little coating; the pulse is wiry (bow string), xian, thin, xi, and fast, shuo.

The agitation of the liver yang is created by the lack of blood and the emptiness of yin; it affects the fire of the heart, the calm of the spirits, by increasing the heat at the periphery and carrying the circulation away to the exterior, thus causing sweats. Treatment must increase the yin and nourish the liver.

3) Following emptiness of yin, the yang is too strong

or, The liver yang rises too strongly in power

or, Following emptiness of yin, the liver flourishes

From a situation of empty liver yin, inflammation develops; the rise of internal heat transforms into an internal fire which attacks the kidney yin and gives rise to new symptoms. The head and eyes are swollen and painful, vertigo and problems with eyesight intensify and present secondary yang characteristics. The noises in the ears are stronger and resemble those which come from an emptiness of kidney yin. The limbs are numb and paralysed through absence of blood and the liquids necessary to nourish and move the muscles.

It is a situation called 'extreme emptiness of the trunk and secondary fullness of the branches'. Thus the tongue is red, with a thin yellow coating, indicating internal heat and attack of liquids and yin. The pulse is wiry (bowstring), xian, and hard, jian, indicating the inflammatory attack. The aim of treatment will be to increase the yin, balance the liver and reduce the yang.

These three levels of illness present a certain number of points in common, but also specific points which make them recognisable and so guide the fundamental principles of treatment. In the first stage, emptiness of liver blood, it is essential to tonify the liver blood. In the second stage, emptiness of liver yin, it is important to nourish the liver but also reinforce the yin in a more general way, watching the rise of the heat so as to eventually counter it.

In the third stage, where the yang is too strong through emptiness of yin, if one wants to try to increase the yin and re-establish the balance of the blood and liquids, the first thing to do is to reduce the surging of the liver and weaken the wind. Certain symptoms of the third stage are the same as for the rising of fire in the liver meridian, a direct symptom of perverse fullness. The circumstances of the onset of the illness are generally enough to establish the correct diagnosis.

When the yang is too strong due to emptiness of the yin, the onset is relatively gradual and there is normally redness of the cheeks and other signs of internal heat. While in the case of fire in the liver meridian the onset is faster and the illness more violent, and there are at the same time signs of full heat, such as the dark colour of the urine.