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Liver and Gallbladder Damp Heat Syndrome: A Case Study on Benign Nonspecific Liver Dysfunction with Abnormal Enzyme Profile

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Abstract: This paper illustrates that Chinese traditional medicine, as treatment, may be effectively used along with Western methods of evaluation. In this case a 42-year-old female with elevated ALT (SGPT), GGTP, and alkaline phosphatase was treated for undiagnosable liver disease using Chinese herbs and acupuncture over an eight-month period. A liver panel was taken every 60 days, with a ten-month follow-up. Normalization of the enzyme profile was apparent by the second month. The patient was symptom free with normalized liver profile at the end of treatment and remained so up to the time of the last follow-up visit. These results suggest that Chinese medicine is highly effective for cases of benign liver disease of nonspecific origin.

LIVER CONDITIONS and related gastrointestinal dysfunction are commonly seen in an internal medicine practice. According to Chinese traditional medicine, such conditions can range from depressive emotional disturbances to frank organic liver disease. In Western medicine one interesting type is undiagnosable liver dysfunction. These cases are usually symptomatic, with epigastric or right quadrant pain and digestive disturbances. Occasionally, they may be asymptomatic. Whether

such cases are precursors of any specific organic or malignant process is unknown. Nevertheless, quality of life is significantly reduced in these patients due to the persistent symptoms and adverse impact on their digestive function. There is no treatment for these cases in Western medicine since no pathological organism or specific morbid processes can be found.

The purpose of this paper is threefold: first, to evaluate the effects of Chinese traditional medicine using Western laboratory methodology; second, to illustrate diagnostic and prescription principles as related to Damp Heat Liver dysfunction; and third, to demonstrate protocol for long-term follow-up in chronic cases of internal organ dysfunction.

Differentiation of Diagnostic Types

Liver dysfunction in Chinese traditional medicine is divided into several types: Stagnation and depressive syndromes; deficiency syndromes of Qi, Blood, or Yin; and excess syndromes of hyperactive Yang, internal Wind, and Damp Heat accumulation. Underlying etiology of Liver dysfunction may come from several roots:

physiological Kidney Yin deficiency, psycho-emotional or social stress, dietary indiscretion, or parasitic factors.

Stagnation syndromes include three subtypes which are categorized according to location: local and horizontal, downward, and vertical. Local and horizontal stagnation affects the Liver, Gallbladder, and Spleen. These conditions are frequently seen in pairs: Liver and Gallbladder, and Liver over-controlling the Spleen. This type of stagnation is typified by gastritis, ulcerative disease, indigestion, hiatal hernia, and cholelithiasis. Stagnation that causes dysfunction downward creates menstrual and urogenital problems. Stagnation causing excess movement upward along the vertical axis leads to menstrual-related breast pain and distension, fibrocystic breasts, esophageal reflux, globus hystericus, headaches, stroke, and facial neuralgias.

Deficiency syndromes are frequently accompanied by Kidney Yin deficiency or Spleen Qi deficiency, causing any of the above conditions accompanied by fatigue.

Damp Heat syndromes are associated with hepatitis, jaundice, and cholecystitis. They also will contain a stagnation component, with symptoms of pressure, distention, or pain, and may also contain a deficiency component.

Case Study

On routine physical examination by her family physician in January, 1988, a 42-year-old female was found to have elevated liver enzymes and high cholesterol. A follow-up liver panel was done one month after the initial visit. Results showed an increase of liver enzymes. At this point further diagnostic procedures were performed to investigate the cause of the abnormal profile. They included an upper GI series, CT scan of the abdomen, and a sonogram of the gallbladder. Blood tests were performed for anti-mitochondrial antibodies, complete hepatitis profiles, FSH, and estradiol. No abnormalities

were found either through the diagnostic studies or the physical exam. Diagnosis was confined to nonspecific liver disorder, and malignancy was ruled out. No treatment was recommended.

Her initial complaints, as presented at my office in March, 1988, were of discomfort and pain in the upper right quadrant and epigastric areas, along with concern about the laboratory test findings. The pain was experienced as a sensation of "pressure," and was aggravated by manual palpation. Her symptom picture also included frequent night sweats, fatigue, right shoulder pain, and mild indigestion. She considered these secondary problems incidental and thought of herself as an active woman in good physical health, although she did describe herself as feeling "out-of-balance," and also suffered from long-term stress with a depressive tendency. Review of systems and the traditional questions were unrevealing and otherwise unremarkable. Her medical history included the normal birth of three male children and a tubal ligation.

Examination revealed her to be overweight by an estimated 20-25 pounds and of strong constitutional makeup. Her complexion was slightly sallow, with slight nonspecific edematous areas in the face. Her pulse was rapid and wiry. Her tongue was red, enlarged, with teeth marks, and had a thick yellow coating. Her abdomen revealed a wide angle of the rib cage, and was large, flaccid, and edematous, with bilateral subcostal tightness, aortic pulsation between CV-12-14, and lower abdominal flaccidity from CV-3-7. There was tenderness upon digital palpation over the Liver Mu point (LV-14) and surrounding areas of the right costal regions and flank. The liver was nonpalpable and normal to percussion.

Chinese Medical Diagnosis

Damp Heat in the Liver and Gallbladder causing constrained Liver Qi which affected the Spleen transformative function and Stomach's digestive function, leading to Spleen Qi deficiency and Kid-

Table 1.
Herbal prescription: Long Dan Xie Gan Tang (modified)
"Gentiana Decoction to Drain the Liver"

Pharmaceutical name	Mandarin	Qian
Radix Gentianae	Long Dan Cao	3
Herba Capillaris*	Yin Chen Hao	3
Radix Bupleurum	Chai Hu	3
Fructus Gardenia	Sang Zhi	3
Radix Scutellariae	Huang Qin	3
Radix Angelica Sinensis	Dang Gui	3
Radix Paeonia alba*	Bai Shao	3
Radix Codonopsis*	Dang Shen	3
Radix Atractylodis macro.*	Bai Zhu	2
Rhizoma Alismatis	Ze Xie	2
Sclerotium Poriae Cocos*	Fu Ling	2
Caulis Akebiae	Mu Tong	2
Radix Paeonia rubra*	Chi Shao	2
Rhizoma Ligusticum Wallichii*	Chuan Gong	2
Radix Glycyrrhiza	Gan Cao	2

Notes: Herbs omitted from modified formula: Semen Plantaginis, Radix Rehmannia
* = Ingredients added (not contained in classic formula)

ney Yin deficiency due to Heat congestion damaging the Yin.

Treatment Principle

Clear Heat and transform Dampness (qing re hua shi), regulate the Qi of the Liver to remove stagnation (shu gan jie yu), and harmonize the Liver and Spleen (tiao he gan pi). Deficiency conditions of the Spleen Qi and Kidney Yin were to be treated later when the initial symptoms resolved.

Discussion of Diagnosis and Treatment Principles

In this case there is a background of multiple causative factors, including chronic stress, depression, exhaustion from overwork, a measurably healthy diet, weight problems, and high blood lipids, a history of living many years overseas in China and India during childhood, presumptive of dietary or microbial impact on the liver (although chronic hepatitis was ruled out by the antibody tests, and no tests for parasites were taken). The underlying stress and exhaustion combined with lifestyle

patterns created a predisposition to Liver-related conditions. There was a gradual buildup of stagnation of the Qi of the Liver and Gallbladder, which weakened the Spleen, causing Damp accumulation. The stagnation of Qi and Dampness eventually transformed to Heat. At the time of presentation, the Damp Heat and stagnation pattern predominated as an excess syndrome.

According to the treatment principles of Chinese traditional medicine, stagnation and Heat should always be addressed before deficiency. Mild, simultaneous treatment of the deficiency is acceptable, however, since warming herbs may balance the harsh effects of the cold-natured herbs that clear Heat and toxins.

There was also a "formless" quality to the Damp accumulation since the amount of edema was minimal, there were no mucoid secretions, and her condition was only mildly symptomatic yet displayed frank abnormalities in the liver profile, and the pain was diffuse, elusive, and accompanied

by a functional mental depression. These conditions were treated by herbs to remove Dampness and promote the flow of water, combined with herbs to regulate the Qi, and aromatic herbs to dry the Damp Spleen.

Herbal Prescription

Long Dan Xie Gan Tang (modified): Gentiana Decoction to drain the Liver (see Table 1).

Acupuncture Points

GB-37	Guangming
LV-3	Taichong
LV-14	Qimen
SP-6	Sanyinjiao
SP-9	Yinlingquan
SP-15	Daheng
SP-21	Dabao
ST-36	Zusanli
ST-21	Liangmen
CV-13	Shangquan
BL-18	Ganshu
BL-20	Pishu
BL-23	Shenshu
K-3	Taixi
PC-6	Neiguan

Treatment Protocol and Therapeutic Recommendations

Acupuncture was given twice weekly for four months, then once per week for an additional six months. Herbal formulas were taken by mouth one cup two times per day. The patient was advised to avoid fatty and spicy foods, alcohol, caffeine, and to eat complex carbohydrates, increase fresh vegetable intake, and provide supplemental fiber to 25 grams. Blood tests were taken approximately every 60 days.

Treatment Theory

Formula Discrimination

Bupluerum formulas are considered the first line of treatment for general Liver conditions. Choices for this case would include: Da Chai Hu Tang, Xiao Chai Hu Tang, and Chai Hu Shu Gan Tang. These formulas were ruled out because Damp

Heat was the predominant clinical entity to be addressed, rather than Liver Qi stagnation.

Formulas containing herbs to clear Damp Heat such as Gentiana and Capillaris are frequently used in cases of excess Liver Fire or Damp Heat accumulation. Long Dan Xie Gan Tang is the representative formula for the treatment of Damp Heat syndromes in the Lower Heater regions, including hepatitis, cystitis, colitis, prostatitis, and leukorrhea.

In this case it was necessary that the formula address Damp Heat first, since it was the most excess condition. Additionally, it was necessary to regulate the Liver, since it was the central organ system involved, as well as supportive tonification of the Spleen and Kidney. In cases of localized stagnation it is also important to regulate the Qi and Blood. In this case the Qi stagnation was primary, since the pain was mild, creating a feeling of pressure or distention, and was not localized or sharp. Damp accumulation was also treated by removal of fluid through diuresis and drying of Dampness through warm tonification of the Spleen.

Formula Discussion

Choice of formula is related to the disease condition, the patient's constitution, and treatment principle. Long Dan Xie Gan Tang was selected as the core formula in this case, since it addresses primarily the Damp Heat with Gentiana, Gardenia, and Scute; Liver regulation and harmonization with Bupleurum; regulation of Blood by Angelica sinensis; regulation of Qi by Akebia; tonification of Kidney Yin with unprepared Rehmannia and Alismatis; and mild diuretic removal of accumulated fluid by Alismatis, Plantaginis, and Akebia. The formula is harmonized and guided by Glycyrrhiza.

Modification was required to address the more serious but "formless" type of Damp accumulation, as well as the Spleen deficiency and Qi stagnation. According to principles of modification, some herbs

were included to enhance the effects of the leading and secondary herbs, and some were deleted that were not applicable to the presenting symptom-sign picture. Codonopsis, Atractylodis and Hoelen (Sclerotium Poriae Cocos) were added to nourish the center and remove Dampness. Capillaris was added to enhance the effects of Gentiana and Gardenia in removing Damp Heat. Paeonia was included to reduce Heat, benefit the Blood, and harmonize the Liver Qi and Blood. Ligusticum and Paeonia were added to aid in the circulation of Qi and Blood. Rehmanniae was removed, since the Spleen was symptomatically weaker than the Kidney Yin and it may have caused indigestion due to its cloying nature. Plantaginis was removed since there were no overt urinary tract symptoms and the most appropriate principle for removing Dampness in this case was that of drying Dampness rather than removing Dampness through diuresis.

Discussion of Acupuncture Points

The following points were selected: BL-18, 20 and 23 to regulate the Yin function of the Liver, Spleen, and Kidney according to the theory of using Yang to treat Yin; GB-37 and LV-3 as Luo-Source combination to regulate the Liver and Gallbladder, with LV-14 (the Liver Mu point), to affect the Liver's function; SP-6 to harmonize the three Yin, SP-9 to remove Damp Heat from the Middle and Lower Jiaos, CV-13, ST-21 and 36, SP-15 and 21 to enhance the digestive function of the Spleen and Stomach and to regulate the Qi in the middle regions to control pain; K-3 to nourish the Yin of the Kidney; PC-6 to enhance the function of the three Jiaos and to relax the patient's moods; along with local Ashi points on the flank and upper abdomen to circulate Qi and stop pain. Regulating method was applied to all points except LV-3, which was sedated.

Disposable No. 5, 1.5-inch Seirin needles were used, retained for 15 minutes. Occasionally, electrostimulation was applied at the local abdominal area with a

model WQ10 Multiple Electronic Acupunctoscope (Beijing, P.R.C.) apparatus at low frequency (10-20 Hz) with intensity to tolerance to relax the muscles and reduce pain.

Clinical Course

Acupuncture was applied twice per week, and herbal medicine was taken two times per day, in the morning and evening at least 30 minutes before or after food. There were no side-effects reported with ingestion of the herbal teas or with acupuncture. After two months acupuncture was reduced to once per week, and was continued for an additional six months. The patient remained on maintenance therapy for ten months and received acupuncture one to two times per month. She discontinued routine herbal medicine at the end of four months, but continued to take herbs on a variable basis for an additional four to six months.

Blood tests were taken approximately every 60 days for the first seven months (Feb-Oct) with a 10-month follow-up after the last test.

After approximately four months into the therapy the herbal formula was changed to one of predominantly Spleen Qi tonification with Liver Qi regulation based on the harmonization method. Xiao Chia Hu Tang was chosen and combined with Liu Jun Zi Tang. This combined formula caused indigestion and increased abdominal distention. It was decided that the interior excess of Dampness and Heat was still in dominance even though symptoms had been moderated. She was placed back on the original formula and dosage (one cup two times per day) two weeks per month with a two week rest in between for two months. This course was followed so as not to weaken the Qi state by prolonged use of cold-natured herbs.

Results

Symptoms began to reduce within the first two weeks of therapy. By the end of the third month the patient was nearly

Table 2.
Chronological comparison of liver profile

Date	ALT (SGPT) 0-45 u/L	AST (SGOT) 0-35 u/L	GGTP 0-35 u/L	Alk. Phos. 30-120 u/L	Cholesterol 135-200 mg/dL
1-14-88	36	27	134	108	258
1-26-88	78	42	221	129	217
2-17-88	157	71	375	304	202
3-28-88	Acupuncture and herbal therapy begins				
5-05-88	35	29	80	106	225
7-18-88	31	19	74	87	215
10-3-88	27	24	65	82	170
8-15-89	43	26	111	110	230

symptom-free. The pulse pattern had changed from wiry to normal, but soft. The tongue picture had changed from an enlarged red tongue with teeth marks and a thick yellow coat to an enlarged pale-pink tongue without teeth marks and with a thin white coat.

The laboratory markers were significantly changed by the time of the first post-treatment test and continued to be reduced during the course of treatment (see Table 2). At the time of the 10-month follow-up, when the patient had not been taking any herbs for at least two months and had had only an occasional acupuncture treatment, there were some returned elevations. The most significant reduction was in ALT (SGPT) and AST (SGOT), which stayed consistently in the normal ranges during treatment and in the post-treatment phase. GGTP and alkaline phosphatase were also significantly reduced during the treatment phase but became slightly elevated during the post-treatment phase. The cholesterol remained relatively unchanged during the treatment and post-treatment phases.

Discussion

This case illustrates the combined use of traditional Chinese methods of treat-

ment with Western methods of evaluation and illumines the importance for solid evidence of improvement in chronic cases. It also demonstrates a very classic case of Liver and Gallbladder Damp Heat syndrome.

The results indicated significant improvement in the liver functions of this patient. It was also obvious that there remained some underlying pathogenesis, because at the time of the 10-month follow-up serum levels of liver enzymes became slightly elevated. Also, the patient was unable to tolerate the Qi tonification and harmonization method even though the original symptoms and signs were nearly eliminated. It is also interesting to note that the cholesterol was nearly unchanged throughout both treatment and post-treatment phases. Other than the clinical deduction that the patient may still have some unresolved pathology, the significance of an unchanged cholesterol, given that her diet was low in fats, remains unclear.

It is the author's opinion, based on this case and a number of other similar cases, that nonspecific benign liver dysfunction is successfully treated by Chinese herbs and acupuncture. This method of therapy may be considered the treatment of choice for these types of cases.

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