THE TREATMENT OF DEPRESSION WITH ACUPUNCTURE---THEORY AND RESEARCH

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I. INTRODUCTION

Acupuncture has traditionally been employed in China to treat most illnesses, including what we would today call major depression. In addition to centuries of clinical experience, there are now a number of controlled medical research studies confirming that acupuncture is an effective therapy for the treatment of major depression.

Depression is a very common condition with estimates ranging as high as 17% of the population that will experience this condition at some time in their lives. This paper summarizes the symptoms generally associated with a Western medical diagnosis of major depression and the Western medical treatments for this condition. The primary Western medical treatment for major depression is now the use of antidepressant drugs; these have side effects for many of the users and are ineffective in many cases.

A discussion of the Traditional Chinese Medicine (TCM) differentiation and treatment for depression is also included with cross-reference to the Western medical diagnosis categories.

Finally, a survey of some of the available research studies is included. Research is still relatively sparse on treating depression with acupuncture. However, NIH is now funding a new larger scale study that will be published sometime in the next few years. The research to date indicates that acupuncture is an effective treatment for depression. The great advantage of acupuncture treatment over antidepressant drugs is the absence of negative side effects with acupuncture.

TCM treatment with herbs is beyond the scope of this paper although there are also a number of studies addressing this issue. Treatment of mental conditions other than major depression is also not included.

II. WESTERN MEDICAL DEFINITION OF DEPRESSION

Depression is a term that has been commonly used to describe a variety of ailments ranging from minor to incapacitating. However, from a western medical clinical standpoint, the

current definitions are found in the Diagnostic and Statistical Manual of Mental Disorder, fourth edition (DSM-IV), published by the American Psychiatric Association (APA), 1994. The DSM-IV details the diagnostic criteria for over 300 mental disorders that might be the focus of western medical professional attention.

Clinically significant depression, termed major depression is a serious condition characterized not only by a depressed mood but also a cluster of other somatic, cognitive and motivational symptoms. Major depression can be differentiated from a normal and transient sad mood by several factors, primarily the following:

- Intensity: major depression causes impairment in social or occupational functioning and persists across time and situations
- Relationship to antecedent events: major depression either occurs without any identifiable antecedent event or is in excess of what would be considered an expected reaction.
- History: major depression typically occurs after a history of other such episodes.

These requirements would exclude many normal reactions to life situations, such as moderately prolonged grief after the death of a closely related person.

In order to be diagnosed with a major depressive episode according the DSM-IV, an individual must have one of the two following symptoms:

- Depressed mood for most of the day on nearly every day
- Loss of interest or pleasure (anehedonia) in all or almost all activities for most of the day on nearly every day.

Additional symptoms that may accompany the above are the following:

- Significant prolonged weight loss or weight gain or decreased/increased appetite
- Insomnia or hypersomnia
- Observable psychomotor agitation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Diminished ability to think or concentrate
- Indecisiveness
- Recurrent thoughts of death or suicide

The DSM-IV distinguishes two broad classes of mood disorder: unipolar and bipolar disorder. Unipolar disorders involve only the depressed dimensions of mood and do not include periods of above average mood such as manic or hypomanic episodes. There are two unipolar mood disorders: the major depressive disorder discussed above and dysthymia. Dysthymia is similar to major depressive disorder but is less intense but more chronic. There are also numerous combinations of mania and depression. The three primary types described in DSM-IV are bipolar I disorder, bipolar II disorder, and cyclothymic disorder. However, these last three are beyond the scope of this paper, as is depression that occurs after a prolonged physical illness such as stroke.

III. EPIDEMIOLOGY AND WESTERN MEDICAL TREATMENT OF MAJOR DEPRESSION

Major depression is a relatively common condition. Lifetime prevalence estimates vary from 5% to 17%. Unipolar depression is approximately twice as common in women as for men. The costs of major depression are substantial, exceeding other chronic diseases such as diabetes or hypertension in terms of personal distress, lost productivity, interpersonal problems and suicide. A recent study estimated that the annual costs of depression in the United States exceeded $40 billion. (figures abstracted from Schnyer and Allen, 2001)

Western medical treatments for depression include both psychotherapies and drug therapies, and numerous studies have delineated the clinical effectiveness of these therapies. However, a great many patients are not significantly helped by these therapies and there are numerous side effects from the drug therapies. Advocates of standard antidepressant medications (e.g. tricyclics) generally acknowledge that about one-third of patients do not improve with medication, one-third display improvements with placebos, and the remaining third demonstrate improvement that would not occur with placebo. (Greenberg & Fisher, 1997).

Commonly prescribed antidepressants are monoamine oxidase inhibitors (MAOIs), Tricyclics(TCAs), and Selective Serotonin Reuptake Inhibitors (SSRIs). Of these the SSRIs are

the most popular today with well-known brand names such as Prozac, Paxil and Zoloft. Common side effects of the SSRIs include increased anxiety, nausea, weight loss, headaches and sexual dysfunction. Furthermore, while these antidepressant medications are often effective in the short term, little is known about their long term efficacy and a substantial number of patients have reported the return of depressive symptoms despite continued treatment.

IV. DIFFERENTIATION OF DEPRESSION ACORDING TO TRADITIONAL CHINESE MEDICINE

Major depression as described above is a complex interplay of disease mechanisms that develop from three main factors: (1) excess or deficiency of either yin or yang, (2) the liver's inability to maintain the free flow of qi (liver qi stagnation), and (3) a disturbance in the heart's function of housing the spirit (shen). The actual etiology, interactions, and progression of the chief symptoms can be highly complex.

The following table illustrates some of the correspondences between the DSM-IV symptoms of major depression and the likely TCM pattern:

DSM-IV SYMPTOM	YIN EXCESS/ YANG OR QI DEFICIENCY	YANG EXCESS OR YIN DEFICIENCY	QI STAGNATION	SHEN DISTURBANCE
Depressed mood	Depressed mood with lethargy and weakness, lower libido, decreased motivation	Depressed mood with irritability, uneasiness, anxiety, violent outbursts of anger, aggression	Depressed mood with emotional lability, periodic outbursts of anger, frustration, erratic physical complaints. Migratory pains, sighing, distension of breast and abdomen	Depressed mood characterized by flat affect

DSM-IV SYMPTOM	YIN EXCESS/ YANG OR QI DEFICIENCY	YANG EXCESS OR YIN DEFICIENCY	QI STAGNATION	SHEN DISTURBANCE
Diminished interest or pleasure	Same as DSM-IV			Same as DSM-IV
Fatigue or lack of energy	Same as DSM-IV			
Appetite Disturbance	Loss of appetite with weak digestion, tendency towards loose stools or diarrhea	Excessive appetite, bitter taste in mouth, thirst	Indigestion with belching, nausea, bloating, flatulence; erratic elimination	
Sleep Disturbance	hypersomnia	Dream disturbed sleep; nightmares		Insomnia with difficulty falling asleep or waking up early
Psychomotor agitation or retardation	Decreased energy level, slow body movements, no desire to move or talk	Inability to sit still, pacing, agitation, nervousness		Incessant, nervous talking. Slow soft monotonous speech; muteness or decreased speech., increased pauses
Worthlessness: excessive or inappropriate guilt	Excessive or inappropriate guilt		Excessive or inappropriate guilt accompanied by frustration and periodic outbursts of anger	Feeling of worthlessness

DSM-IV SYMPTOM	YIN EXCESS/ YANG OR QI DEFICIENCY	YANG EXCESS OR YIN DEFICIENCY	QI STAGNATION	SHEN DISTURBANCE
Diminished ability to think or concentrate	Both features with accompanied by apathy and lethargy	Both features when accompanied by agitation and restlessness	Indecisiveness when accompanied by frustration	Diminished ability to think or concentrate
Recurrent thoughts of death, suicidal ideation or attempt	Recurrent suicidal ideation, no plans and no attempts	Recurrent suicidal ideation, possibly more attempts	Recurrent suicidal ideation with a specific plan	Recurrent suicidal ideation with or without a plan
Other symptoms or associated features	Brooding or rumination, phobias, excessive concern with physical symptoms	Anxiety, panic attacks, phobias	Tearfulness, irritability, excessive concern with physical health, panic attacks with agoraphobia	Tearfulness, anxiety, panic attacks

Source: Schnyer and Allen, 2001

Of course, the above TCM differentiations would be supplemented with tongue and pulse diagnosis. There are often other associated somatic symptoms as well. Note that in the case of suicidal ideation, an acupuncturist should immediately refer the patient to a Western trained professional psychologist or psychiatrist.

Another way to look at depression in terms of TCM differentiation is with the five elements. The following table summarizes these correspondences:

	WOOD	FIRE	EARTH	METAL	WATER
Organ Network	Liver, gall bladder	Heart, small intestine	Spleen, stomach	Lung, large intestine	Kidney, urinary bladder
Emotions and their imbalances	*Anger* Qi tends to rise, lash out or if unexpressed become stagnant	*Joy or fright* Qi tends to get dissipated or scattered	*Worry or pensiveness* Excessive thinking and rumination cause the qi to bind	*Sorrow* Inability to overcome grief weakens the qi	*Fear* Qi tends to descend or becomes petrified and frozen
Mental aspect	*Hun:* provides us with proper judgment, vision, insight, intuition: gives us sense of direction, allows us to plan, influences sleep or dreaming	*Shen:* Maintains our awareness and expresses the integration of our being	*Yi:* Provides concentration and memorization. When imbalanced we tend to think constantly, to brood and ruminate	*Po:* Serves as the organizational principle of the body, gives us the capacity of movement, agility and coordination	*Zhi:* Responsible for drive, determination and along-term memory
DSM-IV associated features	Depression with irritability, periodic outbursts of anger, frustration, erratic physical complaints, digestive disturbance	Depression with diminished interest and pleasure, insomnia, anxiety, speech disturbances, diminished ability to think or concentrate, feelings of worthlessness	Depression with lethargy, excessive or inappropriate guilt, rumination, apathy phobias	Depression with lethargy and weakness, psychomotor retardation, fatigue	Depression with lethargy, apathy, decreased libido, isolation

Source: Beinfield & Korngold (1991)

IV. TREATMENT OF DEPRESSION WITH ACUPUNCTURE

As with all acupuncture treatments, the treatment principles are first determined and the treatment adjusted to fit the complexity of the individual patient. Major depression is generally characterized by the combination of various patterns as outlined above, and it is possible that all of the above patterns may be present in some degree. In addition, the acupuncturist needs to identify which specific organ networks are involved and adjust the treatment accordingly. Pulse, tongue and other somatic syndromes will help the acupuncturist determine which is the main syndrome to be treated at a particular time. As with all acupuncture treatments the primary goal is to help bring the patient's body, mind and spirit back into balance and allow the patient's self-healing to occur. The following table represents some treatment guides based on the various TCM syndromes:

MAIN TCM SYNDROME	SYMPTOMS ASSOCIATED WITH DEPRESSION	MAIN ACUPUNCTURE POINTS
Liver qi stagnation	Irritability, mental depression, moodiness , alternation of moods, snapping easily, feelings of frustration	LI 4, LV 3, LV 14, UB18
Liver qi stagnation transforming to heat	Easy anger, impetuosity, mental restlessness, aggression, violent outburst of anger	UB18, UB15, LV 2, LV 3, LI 4, LI 11, P 7, H 5
Qi stagnation affecting heart and lung	Sadness, a tendency to weep, anxiety, easily affected negatively by the problems of other people	LU 7, HT 7, P 6, R 17, R15
Blood Stasis and stagnation	Agitation, thoughts of suicide, severe insomnia, chronic, sustained or severe depression	UB 17, SP 19, SP 6, SP 8, P 3
Heart blood or heart qi deficiency	Depression with fatigue, confusion, lack of concentration	UB 15, UB 44, R 14, HT 7, P 6, R4, ST 36, SP 6, SP 4
Heart yin deficiency	Dispirited,, depressed and tired yet restless and anxious at the same time; lack of willpower and drive	UB 15, UB 44, R 14, R 15, HT 7, P6
Heart yin deficiency with deficiency heat	Same as above but also aggressive and impatient	H 6, UB 15, UB 44, R 14, R 15, HT 7, P6

MAIN TCM SYNDROME	SYMPTOMS ASSOCIATED WITH DEPRESSION	MAIN ACUPUNCTURE POINTS
Excessive heart fire	Recurrent suicidal ideation, possibly with suicide attempts, aggression, violent outbursts; if severe, manic agitation and delirious speech	H 8, H 5, P 7, R 15, GB 15, SP 6, DU 14, LI 4, LI 11, P 8, H 3
Spleen and lung qi deficiency	Depression with fatigue, slow thinking and speaking, slow movements, poor memory and concentration, decreased motivation, diminished interest or pleasure, excessive desire to sleep	UB 20, UB 21, UB 49, R 4, R 6, R12, ST 36, SP 3
Kidney qi or yang deficiency	Mental and physical exhaustion, no willpower or initiative, hopelessness about getting better or starting or changing anything. Everything is too much effort	UB 23, UB 52, DU 4, R 6, K 3, K 7
Phlegm misting the heart	Mental confusion, poor memory, withdrawal. If severe, loss of insight and total mental confusion, obsessive thinking and rumination	ST 40, P 5, P 6, P 7, LI7, LI4, ST 25, DU 20, ST 8
Kidney yin deficiency	Depression with exhaustion, lack of willpower, feeling aimless, rigid mental attitude, restlessness, despair	UB 23, UB 52, K3, K 6, KD 10, SP 6, R 4, KD 9, KD 22, K 27
Hyperactivity of liver yang	Pronounced irritability, palpitations, insomnia, anxiety	GB 20, LV 2, LV 3, LI 11, YINTANG
Spleen deficiency giving rise to yin fire	Sorrow, inexplicable weeping and crying, agitation, anxiety, and insomnia	R 4, R 6, R 15, UB 20, UB 23, SP 9, SP 6, H 5

Of course, all of the above point selections are adjusted for the individual patient, local-distal, upper-lower, and left-right with duration and manipulation adjusted as needed.

VI. RESEARCH ON DEPRESSION AND ACUPUNCTURE

Although there is a great deal of individual clinical experience on treatment of depression with acupuncture, there have been very few formal research studies. Outside of China, most of the research has been done in Russia. While many articles are not yet translated, the following abstracts are available:

Western research abstracts:

a. Journal of Psychological Science, #5, 1998, p 397-401: B. Allen. and R.N. Schnyer. studied the effects of acupuncture on 38 women, aged 18-45, suffering from depression. After screening by western psychologists, a Traditional Chinese Medical diagnosis was performed to determine their TCM pattern, treatment principle, and treatment plan. The treatments were designed by the assessing acupuncturist but were administered by four other acupuncturists. Neither the assessing acupuncturist, the patient, or the treating acupuncturists knew which treatment group the patient was in. After completion of the specific treatment, using the DSM-IV remission criteria, 64% of the women experienced full remission, 18% experienced partial remission, and 18% experienced no remission. These results compare favorably to both psychotherapy and pharmacotherapy whose effectiveness generally falls between 65-70%. This research study was funded by NIH and the authors are now conducting a larger NIH funded study. The authors wrote a book about their study (listed in this paper's bibliography) and their book provided much of the material for this research paper.

b. Journal of Neuropathology & Psychiatry, #12, 1983, p.1853-1855: V.D. Kochetkov, A.A. Mikhailova, and I.G. Dallakian. treated 41 neurotic patients with pronounced depressive symptoms using acupuncture. A decrease in depressive symptoms along with changes in the nocturnal and diurnal electroencephalogram (EEG) readings was noted.

c. Journal of Neuropathology & Psychiatry, #4, 1987, p. 604-608: S. E. Poliakov treated 167 patients with depression associated with manic-depressive psychosis and schizophrenia using acupuncture. The paper presents the results of psychological, biochemical, and electrophysiologic examinations of patients in the process of treatment. Acupuncture was found to resemble the effect of some antidepressant drugs and was found to be effective in patients showing resistance to antidepressants.

d. Neurology #11, 1998, p.961-967: J. Roschke, C. Wolf, P. Kogel, and S. Bech studied the comparative treatment of 70 patients with acupuncture and mianserin drug therapy. One group received acupuncture with the drug, one group received sham acupuncture with the drug, and one group received the drug alone. The group receiving acupuncture with the drug responded more favorably to treatment than the control groups.

Chinese Research Abstracts:

a. Journal of Traditional Chinese Medicine, #5, 1985, p. 3-8: H. Luo, Y. Jia, and L. Zhan treated 47 patients diagnosed with clinical depression of 5 to 6 months duration. Patients were randomly assigned to treatment groups receiving either acupuncture of Western medication. Acupuncture patients received electrical stimulation for one hour per day, six days per week, via needles inserted at two points, one on the scalp and one on the forehead. After five weeks of treatment 70% of the acupuncture patients were judged cured versus 65% of the group taking medication. In addition, the Clinical Global Impression (CGI) index used found significantly fewer side effects in the acupuncture group.

b. Psychiatry & Clinical Neuroscience, #12, 1998, p. 338-340: H. Luo, F. Meng, Y. Jia, and X. Zhao found that electroacupuncture treatment is as effective as amitriptyline for patients with depression. Patients were divided into three groups: electroacupuncture plus placebo, amitriptyline, and electroacupuncture plus amitriptyline. The conclusion was that acupuncture got a better therapeutic effect than the drug and with fewer side effects.

c. Zhejiang Journal of Chinese Medicine, #3, 1996, p. 131: Yang Danhong and Feng Liping treated 34 cases of menopausal depression with a combination of scalp and body acupuncture. All of these women had previously been treated with Chinese or Western medicines with no effect. Patients were needled

according to their differentiation with a total of 10 treatments over 20 days. The total amelioration rate was 88.2%.

VII. CONCLUSION

Abundant clinical experience over many centuries along with the few studies that have been done have shown acupuncture to be effective in the treatment of major depression and related conditions. In addition, when compared with the alternative of antidepressant drugs, acupuncture has far fewer side effects and is of equal or greater efficacy. In the future, as more clinical studies are performed, acupuncture will occupy a more prominent place in treatment of major depression and related conditions.

VIII. BIBLIOGRAPHY

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