

Case Study

A CASE STUDY OF THE SYNCHRONIZATION OF HUMAN ENERGY IN AN ACUTE CONDITION OF CHRONIC HEART DISEASE THROUGH COMPLEMENTARY TREATMENT

Phillip Shinnick, Ph.D., M.P.A. & Simon Freed, Ph.D.

ABSTRACT

This is a longitudinal case study of chronic heart failure incorporating several therapies including medication (digitalis, enalapril and furosemide), acupuncture, Zen meditation, and Qigong during an acute condition lasting six weeks in the middle of a nine-month terminal illness. These therapies helped with the synchronization of human energy from patient's signs and symptoms which de-synchronized breathing (rapid breathing), sleep (nightmares), blood pressure (rapid drop), sputum production (high), edema (pedal), warmth (cold), and esophagus functioning (restriction). Many of these symptoms can be fatal without synchronization when occurring in old age (the subject was 97 years old) and during an acute phase of Chronic Heart Disease. Detailed daily recording of symptoms and treatment procedures provide a guide for techniques which can alleviate suffering through synchronization and prolong life and improve the quality of life in a patient with an acute episode of Chronic Heart Failure. This provided stable time periods to help resolve issues of death and dying. Therapies changed as the condition worsened: for acupuncture, from prescribed particular points to larger areas; in meditation, from watching the breath during the crisis to long (2-3 hour) periods of meditation, and for Qigong, from fixed to specific arm movements to create warmth.

KEYWORDS: Acupuncture, chronic heart disease, complementary medicine, diaphragm, dreams, fears, meditation, muscle spasm, nightmares, Qigong, suffering, terror

INTRODUCTION AND BACKGROUND

This article was a joint project between the authors as they explored scientific approaches to body, mind and spirit healing during a life threatening illness of one of the authors (SF). Their discussions about appropriate therapy, including acupuncture, meditation, Qigong, massage, and Western medicine was an outgrowth of their interest in developing a scientific understanding of the mind/body connection in health and healing. The present study incorporates several complementary therapies used in treatment over a 6-week period during an acute period of Chronic Heart Disease begun midway in the course of a terminal illness due to cancer of the esophagus. Death resulted ultimately from a weakened nutritional condition due to restriction of the esophagus from the cancer. SF chose not to have a shunt in his stomach.

SF, a 97-year-old male scientist with a recent pacemaker, overextended himself the winter of 1994 by delivering a technical paper in Israel and consulting in Czechoslovakia. Upon returning to New York during a severe winter storm, he experienced a quick (twenty minute) drop in external temperature (25°F to 5°F) with a 12-mile an hour wind during a long walk. This exposure left him weak and full of phlegm, which required hospitalization in March. At first he was treated with an intravenous antibiotic for ten days but later x-rays showed water in his lungs rather than pneumonia. In Traditional Chinese Medicine cold and wind are two of the six excesses along with heat, dampness, dryness and summer heat. "When environmental forces become excessive [e.g., a particular cold spell in winter] . . . they may cause disease."¹

Previous to this six-week study, the authors worked together weekly for eight years around the theme of global physiological states. The term "global" in our studies means a state that requires the whole organism to be synchronized (as in Figure 1) of the EEG patterns of meditators compared against a more "normal" state. Shown are two brain fields, a) one meditator's brain field in a homogenous or synchronized state of a resting electroencephalogram at 10/sec, alpha rhythm "relaxed wakefulness" and b) the other a non-meditator's brain field in a differentiated state of desynchronized alpha waves. These would be examples of global measurement with the first state being more "global" and synchronized and the second differentiated and de-synchronized.

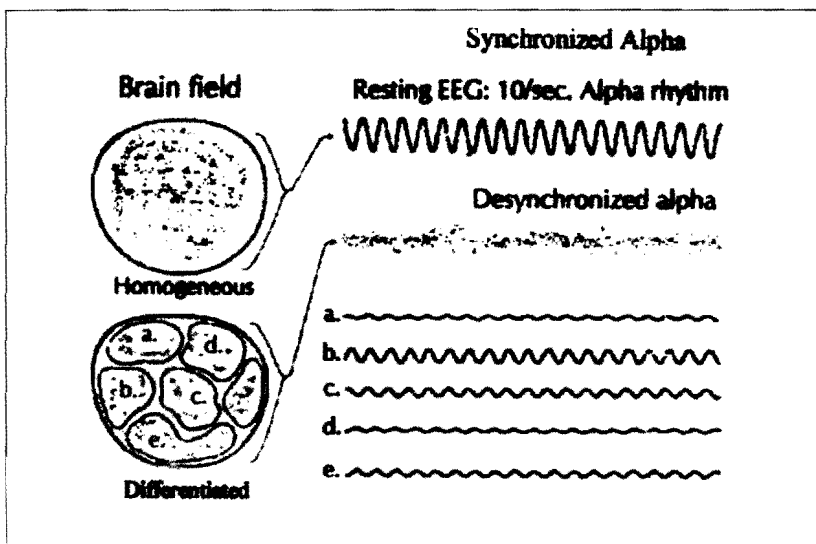


Figure 1. Two brain fields: Synchronized or homogeneous of meditators and de-synchronized or differentiated of non-meditators. Alpha rhythm of EEG in state of "relaxed wakefulness" and its desynchronization by authors reworked from Lindzey, 1961 and Pribram, 1971.^{2,3}

Both authors had been meditators for over twenty years and understood the various forms of meditation, researched the physiology of meditation on global characteristics and studied the heart.⁴⁻⁸ In this study our techniques were derived from a variety of sources but ultimately were our own techniques. In meditators, other global physiological characteristics are apparent as we show in Figure 2. This figure shows that over time oxygen consumption in meditators drops relatively quickly as compared with sleepers.

Figure 3 shows a drop in blood lactate, which is another indicator of global physiological characteristics during meditation.

This case of Chronic Heart Disease, through its symptoms, represents a de-synchronized, differentiated state which includes an agitated mental and emotional state while facing dying, respiration rhythm difficulties of all deadly sorts and the side effect of modern medication. As indicated above, meditation helps bring a quiet state to the brain field and a decrease in oxygen consumption and blood lactate. Moving toward a more synchronized and more

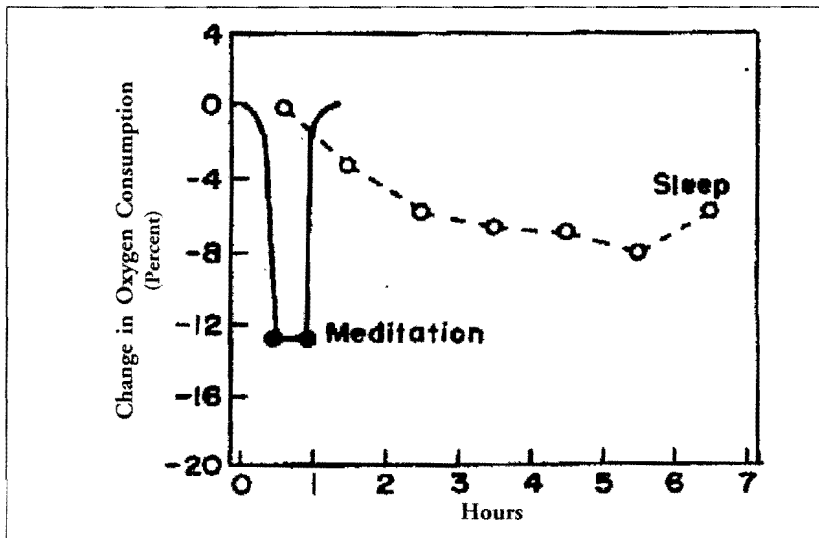


Figure 2. Comparison of oxygen consumption during meditation and during sleep put together by authors after Benson.⁹

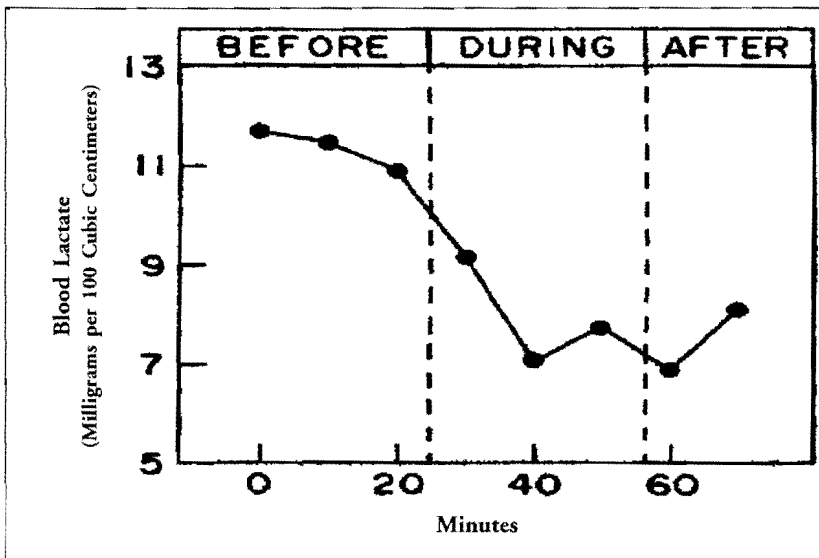


Figure 3. Blood lactate changes associated with meditation adapted by the authors after Benson.⁹ Before, During and After the "Quiet."

global physiology is possible through meditation. These charts reflect sitting meditation such as Zen but there are other sorts of meditations, which will be discussed later such as watching the breath for length of inhalation and exhalation. Our techniques changed as symptoms changed.

Acupuncture also shares some of these same global characteristics as meditation. A before and after picture of a Single Photo Emission Computed Tomography (S.P.E.C.T.) to the brain shows an asymmetry inside the brain before acupuncture in a normal or pain state and an increased symmetry inside the brain after acupuncture.¹⁰ Other global measurements such as infrared imaging show thermal changes after acupuncture.¹¹ Acupuncture can also help in affective disorders and psychosomatic illnesses.^{12,13}

Besides thermal changes brought about through acupuncture and meditation, Qigong studies led us also to believe that this therapy might be important in a terminal illness when cold and lack of heat aggravates the condition.¹⁴ For a year in the late 1980's, every six weeks, at the International College of Acupuncture and Electro-Therapeutics, Qigong was studied by inviting various Masters in Qigong to treat patients and discuss their technique. The Qigong state and effect on the patient and the person doing the external Qigong was measured. "External" refers to a person giving Qigong to another either to demonstrate or to help the healing process in pathology. "Internal" refers to a person doing Qigong for his or her own health and directs the Qigong energy inward. Slowly through observation and practice we developed some skill in internal and external Qigong. It is the internal Qigong technique, which SF developed and used during the terminal illness to raise his body temperature.

This method will be discussed in more depth later. Briefly, however, he assumed a position, in his case bent legs, arms in a circle with fingers tips a centimeter apart, breathed naturally and looked through the space between the fingers onto the floor about a meter ahead. After an undefined period, depending upon practice and the day, when tingling in the fingertips was experienced or the space between the fingers changed color then he would think of a part of the body. Once this Qi was experienced through sight or sensation then we relied upon the axiom—where the mind goes, energy follows. SF had been doing inner Qigong for about five years. He had had a rash on his back from swimming in a river in Central America about fifty years earlier, which he wanted to treat with this method. SF concentrated on this rash on

his back after experiencing the Qi and then with some concentration felt his back become warm. After doing the meditation for about five to ten minutes each day over a period of five years the area improved by 90% and returned only 20% more during his illness.

In addition to our studies on the synchronization and symmetry of the brain field, oxygen consumption and blood lactate, and thermal changes, we also studied the characteristics of fragmentation. We studied a fragmented state of confusion, dualism, ill health and emotional turmoil and the relation between the mind and body.¹⁵⁻¹⁷

Graphs A-H are an attempt to look at what happened on a time line and a measurement of quantity from a particular date such as the start of enalapril (Vasotec) and fluid volume in parts of the body. We needed to differentiate medically-induced-fragmentation from symptoms of Chronic Heart Disease. These relationships can be seen in this context.

In Chronic Heart Disease, exertion, overstrain or cold wind and temperature can create symptoms of tiredness, fluid in the lung, cold symptoms, sputum production, cough, rapid breathing, nausea and abdominal spasm, no appetite, mental disturbances, insomnia and restless sleep, and fear. These were our questions: What techniques of meditation, Qigong and acupuncture can alleviate the symptoms of Chronic Heart Disease? Which complementary treatments and techniques can help alleviate heart medication side effects such as a drop in blood pressure? How effective is Traditional Chinese Medicine acupuncture techniques for symptoms of Chronic Heart Disease? What new techniques can be learned from this study in acupuncture, meditation and Qigong for particular symptoms? From these question came the desire to test and measure these states of Chronic Heart Disease in an acute state (with traditional heart medication) using meditation, acupuncture and Qigong. These transcendent states could help theoretically in the terminal phases of life *i.e.*, escaping from conditioned thinking associated with fear. We wanted to test this general understanding with a particular case.

DESIGN AND METHODS

The overall method of treatment was a joint effort of the two authors, the experimenter (PS) and the subject (SF). SF died two months after this six-

week study period. Each day physical symptoms, acupuncture points, the form of daily meditation, and Qigong were recorded in a journal (See Appendix I). SF's private and attending physician at Beth Israel Hospital in New York City coordinated and consulted on the progress of this study.

SF's heart condition stabilized, relatively, after four months of combining medication, meditation and acupuncture. A rough-sounding breath pattern late in our study triggered another X-ray, which revealed a mass protrusion at the level of the 7th cervical vertebra, diagnosed as cancer. He also had an anterior osteophyte fusion at the same level. He refused a shunt into his stomach or cancer treatment. In the end, six weeks later, he died due to narrowing of the esophagus and a restriction of food intake. Lack of albumin in converting nourishment to blood resulted in water accumulation throughout his body. He remained quite comfortable with the continuation of meditation. In the last days he suffered from constipation due to weakness. Two needles on the superior and inferior descending colon (St-21, 28) were connected with electrical stimulation at heart beat frequency for 15 minutes then needling opposite the eleventh thoracic vertebra on the bladder point which resulted in a complete elimination, his last before his death several days later.

This single case study is based upon observation of the relationship between breath rate (or anxiety), frequent urination, bad dreams, and abdominal spasms and sputum production (our dependent variables) and acupuncture, meditation, Qigong and medication (our independent variables.) In order to create a time line a daily diary or log was kept which quantified the signs and symptom. The breath was observed in three ways: (1) the ratio of seconds of inhalation to seconds of exhalation, (2) breaths per minute, and (3) smoothness of the process—pressure or absence of hesitations or jerkiness in the inhalation, exhalation and conversions. Sputum production came from observation of the number of expectorations per day and estimated volume of each expectoration (10 cc per day at peak). SF wrote down daily such things as nightly dreams, sleep quality, as well as any other observations. Blood pressure measurements were taken the same time each day and later in the day if required. The initial fluid in the lung measurement came from an X-ray and subsequent decrease or increase measurement came from daily listening to voice quality and fullness of the lungs from back thumping.

Amount of swelling was determined by observing the malleolus and degree of bone obliteration and over the pedal bridge obliteration. Urination volume first came from an average normal volume per day of 900cc and variations from that determined by frequency per day and volume of each urination recorded as large, medium, below average and poor volume.

This journal was transcribed by PS and proofread by SE. After the subject died, PS constructed charts (See Graphs A-H) for urine volume, fluid in lungs, amount of drug, fluid in ankles, breaths per minute, phlegm, and blood pressure. In order to create a time line, each variable was quantified at particular points in time. The journal included measurements of cough, ratio of inhalation to exhalation, the expansion and contraction of the abdomen while breathing, acupuncture, amount and type of meditation, meditative thoughts and Qigong practices.

MEDICATION

Digitalis (Digoxin) at 0.125 mg a day and furosemide (Lasix) at 20-10 mg a day were used throughout the crisis for the heart. After four weeks, enalapril (Vasotec) at 2.5 mg a day was introduced. During the subject's hospital stay and after the study, other medications were used.

ACUPUNCTURE

The particular method of acupuncture, (or meditation and Qigong) varied according to the changing conditions of the disease and can be seen under Results and Discussion. The strategy for our study on Chronic Heart Failure came from *Acupuncture a Comprehensive Text* by the Shanghai College of Traditional Medicine.^{1(p.595)} This disease is considered Deficient Yang Qi of the Heart and Kidneys because the yang functions of the heart are weak and blood congeals in the blood vessels. Consequently because Kidney Qi is deficient, it "lacks the strength to take in the Lung Qi." Normal Qi flow is disrupted and "water and dampness overflow." The principle is to aid and secure the source, the Kidneys, and to strengthen the Heart and spirit.

General needling points: 1st P-6 (Neiguan内关), P-5 (Jianshi间使), H-8 (Shaofu少府)
2nd P-6

(Neiguan内关), P-4 (Ximen 门), P-3 (Quze曲泽)

Supplemental: *Gastro-Intestinal*; Ren-12 (Zhongwan中脘), S-25 (Tianshu天枢), REN-6 (Qihai气海), S-36 (Zusanli足三里)

Strengthen Source; REN-4 (Guanyuan关元), S-29 (Guilai归来), REN-6 (Qihai气海)

Facilitate urination and eliminate edema; REN-9 (Shuifen水分), S-28 (Shuidao水道), K-7 (Fuliu复溜), K-5 (Shuiquan水泉), Bl-58 (Feiyang飞扬), Sp-9 (Yinlingquan阴陵泉), REN-3 (Zhongji中极), REN-2 (Qugu曲骨)

Distention of the Liver; Li-3 (Taichong太冲), Li-13 (Zhangmen章门) and Bl-18 (Ganshu肝俞)

Relieve panting suppress coughing and eliminate phlegm; Bl-13 (Feishu肺俞), REN-22 (Tiantu天突), K-27 (Shufu俞府), REN-17 (Shanzhong膻中), H-8 (Shaofu少府), and LI-4 (Hegu合谷)

Prescriptions from Traditional Chinese Medicine were given for the first month and in the last two weeks acupuncture was used in larger areas to improve respiratory and physiological functioning and to release spasms.

Acupuncture treatment method went from (1) treating specific symptoms such as decreasing phlegm, stopping rapid breathing, expelling fluid from the lungs, stopping the cough, and lowering edema, to (2) treatment of the psycho-somatic aspects of the terminal disease: feeling of terror due to fear of imminent death. Moxibustion was used because of low body temperature (95.7°F, see Appendix I) once to twice a week for a month. As the body temperature increased and stabilized and it became warmer, Moxibustion was discontinued. This occurred after a month on 6/1/94 when body temperature reached 98°F.

MEDITATION:

VOLUNTARY AND INVOLUNTARY USE OF THE WILL OR VOLITION

VOLUNTARY MEDITATION TECHNIQUE. This technique used volition to move or hold voluntary muscles, as in breath control (coordination of abdominal muscles with the breath) or in Qigong, by assuming a certain physical position while coordinating breathing.

BREATH CONTROL. These breathing techniques were used to calm a cough, expel phlegm, break the short breath cycle, harmonize the fragmented breath, and relax abdominal spasms.¹⁸ During the time of fluid in the lung, it created a more efficient breath and calmed panic. We developed these techniques from previous experiences and by observing the results through changes in symptoms. We had no particular guide as to what to do at a point in time so we thought through the process and consulted the journal and came up with the following principles, which seemed to take into account cause and effect. The principle for rapid breathing and fluid in the lungs was to extend exhalation and inhalation, and, after a large inhalation, relax the exhalation and let the air out slowly. In this regard the exhalation is twice as long as the inhalation until the breath is brought under control. For cough and phlegm with an uncoordinated breath (which may have good volume) and abdominal spasms, the breath was harmonized. This means watching the cycle to see hesitations, contractions, and the sequence of the abdomen to the breath. Ideally the abdomen extended out upon inhalation. During a crisis it was important to first extend the length of time of the inhalation and exhalation and then coordinate and harmonize the cycle with the abdomen. For rapid breathing, we attempted to extend and slow the exhalation by relaxing at the top of the cycle after inhalation. For spastic breath, we focused each breath on the obstacle or hitch in the exhalation or inhalation cycle, and tried to create smoothness. For abdominal spasm, we used the internal force of the breath to extend the abdomen on inhalation and lower the abdomen on exhalation. This method stabilized the subject's emotional state and left him in comfort although he was slowly becoming weaker.

SF was in a deficient state and small disturbances such as the start of a bath or shower, or overdoing something would ignite a rapid breath episode. This out-of-control physiology seemed all consuming; it felt like an invasion from somewhere else, totally unfamiliar, consuming, and frightening. The emotional reaction was fear; this fear compounded any condition resulting in a rigidity of the body, and an uncoordinated state of the breath and stomach. A crisis could occur spontaneously if this state persisted. When the breath came under control (body) then dreams came (mind) not in themselves frightening, just vivid, in clear color of past events. Dream events of seemingly no meaning then another, and another, in any sequence or order. Each dream seemed to reflect an actual time. This was very unsettling for SF. This is reflected in Appendix I 5/27/94. This state called for another meditation, getting out of

the mind (see Involuntary Meditation) and this is where SF's previous discipline with Zen meditation became important and very stabilizing. SF stayed in this meditative state for up to four hours. Once after two hours in a Zen state SF opened his eyes. When questioned as to where he had been, he said. "In the great vacuity." See Figures 1-3 as to the physiology of this state.

QIGONG. Generally speaking there are two types of Qigong; internal and external. Internal Qigong strengthens one's own Qi or warmth and external Qigong can benefit others. Before his winter crisis the subject regularly did five to ten minute of daily internal Qigong meditation as follows.

Generally, volition or will is used to recruit the voluntary muscles. The subject would stand with knees slightly bent and arms in a circle as if holding a ball. His fingers were about an inch apart and he would gaze at the ground through fingers, focusing on the floor about one meter ahead. When his fingers started to tingle then his mind would focus on a particular part of the body, and the sensation of warmth to that part would follow. Sometimes after assuming the correct position he would swing his arms to each side. The arm in the direction of movement would swing further out to the side as if holding a bow and the other hand would remain as if there were an arrow in the other hand.

INVOLUNTARY MEDITATION TECHNIQUE. Zen meditation was introduced briefly with breath control, to stabilize the mind. SF especially liked and practiced Zen meditation in good health for many years. Zen meditation is involuntary meditation or not using volition or will to move voluntary muscles.^{19,20} The technique seems relatively simple—sit or lie still, not moving any muscle, and watch the breath but don't try to do anything. One can focus one's consciousness on the upper lip and feel the breath coming in and out. With experience, eventually the breath quiets, thinking becomes minimal, and a quiescence or equipoise (harmonious balance) appears. This is not always possible but even with an active mind this state creates a time when dualism and contradictions can flourish without ill health from the normal physiological fragmentation it brings. In heart disease, with this capability one can experience a disordered physiology and still maintain the meditation and improve. This sitting state was SF's daily meditation for years. For a beginner, against heart disease, in a fearful state, this is difficult to impossible. Zen meditation is not

possible in a crisis situation such as panting or dream disturbed sleep or intense fear. After SF's near death crisis when he was able to use this meditative technique, a calm physiology resulted. SF felt a profound thankfulness for this quiet and ability to meditate in the Zen state.

RESULTS AND DISCUSSION

Graphs (A-H) are an attempt to measure quantity over time. Before May 15th one can see a steady improvement and even a stable period (even though he would decline more in two weeks) in Graph B (lung fluid volume). This created the condition for SF to practice more meditation reflected in Graph C (breaths per minute). This stability and period of mental clarity from meditation created a general peace of mind, up to the 18th of May. Then the subject started dreaming in vivid color of past events, at random, without order or central understanding, i.e., unrelated scenes all night. One can see this reflected in Graph B by a slight increase of fluid in the lung, drop in urination volume (D), abrupt changes in breaths per minute (Graph C-May 18) and increase in phlegm volume (E). SF felt terrorized yet he saw no reason from any particular dream scene to say that he had anything but good luck all his life. Then he realized through his physiological response to the dreams that it was a psychosomatic response to the illness itself, and the thought, "Will this be my death?" In *fear*, the jaw, back of neck, and mid-thoracic tighten and in this subject's case, the kidneys. The organ associated with the emotion fear was deficient in yang Qi.

When the symptoms became frightening, the treatment was to calm the terror by taking away the physical manifestations through acupuncture. The strategy was to release the diaphragm, relax the spastic abdomen, and change the ability to breathe and increase blood to the brain. The acupuncture method changed from points to areas of the body—the diaphragm (circular acupuncture), the spine (each vertebrae from cervical to the lumbar,) the hips (piriformis, quadratus lumborum and external oblique) and abdomen (rectus abdominis), supplemented by master points.

In Graph G one can see blood pressure lowering and becoming unstable in the ratio of systolic to diastolic during the time of enalapril or Vasotec shown in

Summation of Variables

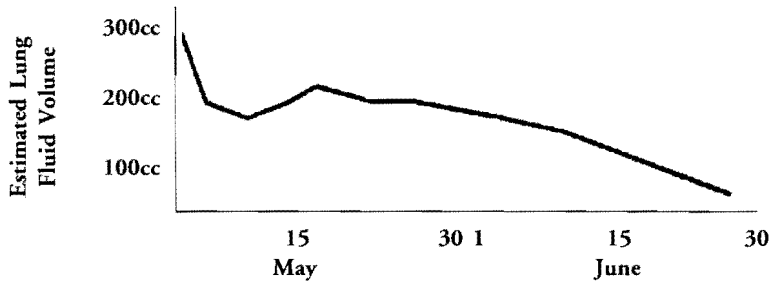
Quantity

- Lung fluid
- Breathing cycle, amplitude and frequency
- Urination volume
- Sputum
- Ankle swelling
- Blood pressure
- Drugs

Time

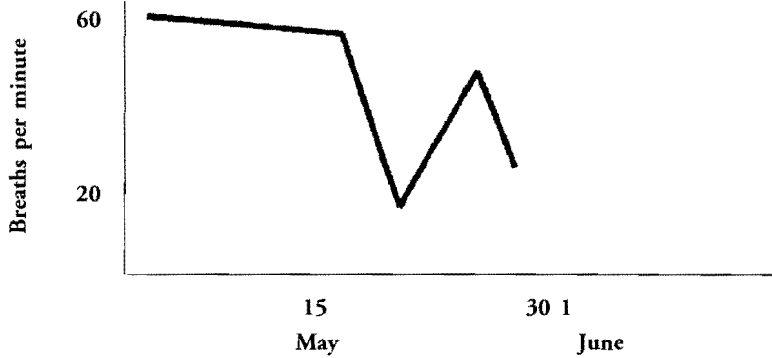
Graph A

Lung Fluid Volume

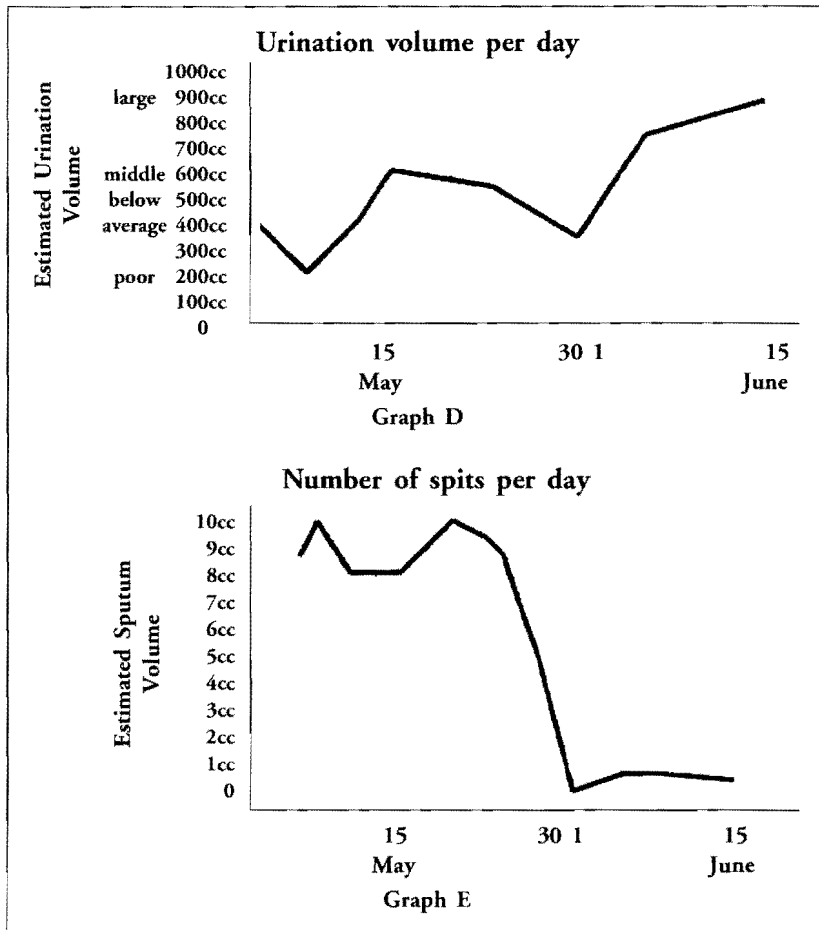


Graph B

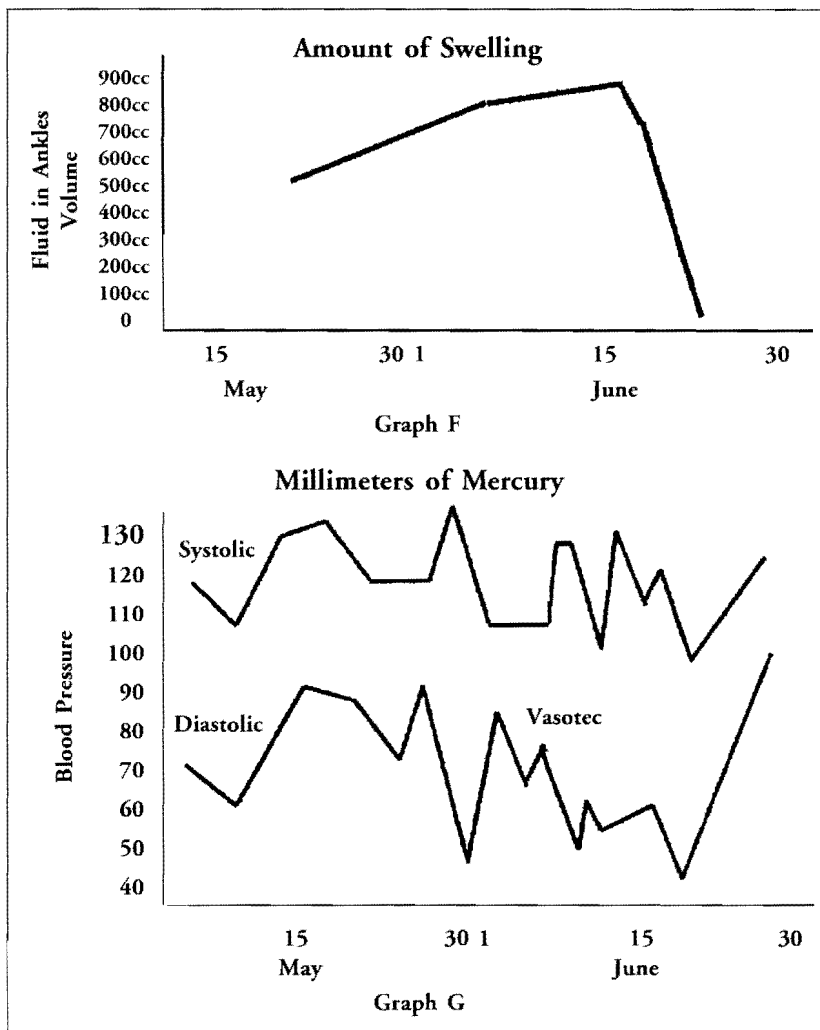
Number of Breaths per Minute



Graph C

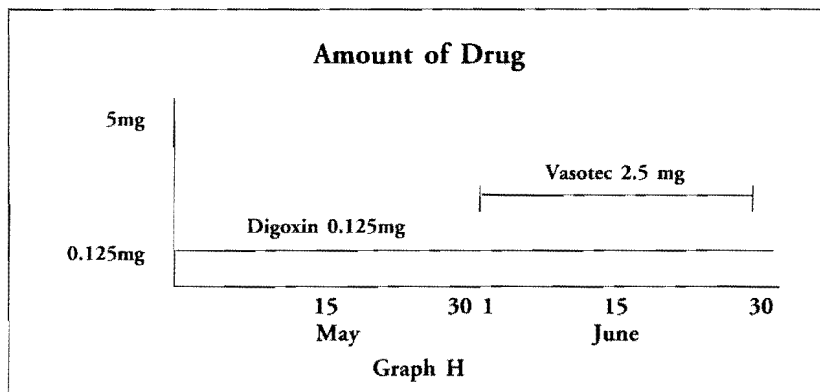


Graph H from May 28th to June 26th. The relationship between Vasotec (Graph H) and swelling of the ankles (Graph F) seem clear—it decreased. The medication (Graph H) tended to drive blood pressure down and acupuncture was able to counter this side effect by bringing it up. Blood pressure (Graph G) instability can be misleading because acupuncture to raise blood pressure increased blood pressure values by 20-30% for 3 to 7 hours. Acupuncture combined with Vasotec can be seen in Graph F ankle-swelling decrease, Graph D, urination volume increases, Graph B lung fluid decrease and Graph E sputum or phlegm volume decreases.



Again area acupuncture was used to decrease fluid volume in the body, see Appendix I (6/12/94). This acupuncture departed from the point location to areas of the body, i.e., the lower abdomen around the Bladder Mu Point or Alarm Point. Concomitant to this was the traditional heart acupuncture to raise blood pressure.

Qigong is a good art against deficient yang Qi of the kidneys and heart which results in a lack of warmth. With daily practice of Qigong the subject was



able to bring warmth to any part of the body on which he focused his mind. One morning after the six-week research had ended, SF was still in bed when PS arrived. He said, jokingly, "I've got one foot in the grave. It's time for Qigong." PS examined SF and felt cold on his forehead and entire body. With great effort he slowly sat up and then stood. He did the usual standing Qigong meditation but nothing happened. He then made upward arm motions (rotating the ulnar aspects of his wrists toward his body and up), and within a half dozen movements he said he felt some warmth. After lying down a small area of warmth in his abdomen was noted below the umbilicus. When PS returned six hours later SF was working in his study with full warmth throughout his body.

SF had a pacemaker inserted the previous Fall but no clinical records of EEG recordings could be found in the hospital records to determine if it was operational or an on demand pacemaker. Therefore the effect it had on this study cannot be determined.

CONCLUSIONS AND SUMMARY

Acupuncture, meditation and Qigong are most effective in treating the changeable symptoms of Chronic Heart Disease. Even when conditions become stable and general energy is good, a psychosomatic response to such symptoms can trigger a crisis. In this case the psychosomatic aspects of the illness became

apparent—feelings of hopelessness, bad dreams, and a general weakening even though objectively the subject had stabilized. No improvement over sleep or appetite could be induced up to that time, and then the fluid in the lungs got worse.

To ameliorate these symptoms and to complement other treatment, the acupuncture regime shifted from particularized local point-needling to extensive needling in general areas around the solar plexus and stomach, lower abdomen, across the back of neck, shoulders and down the paravertebral muscles to the lumbar so that a complete release of the body could be obtained. If the system is not calmed down digestion and breathing will not work. This release reversed the pattern of insomnia and loss of appetite and made it possible for the subject to sleep and eat. Slowly there was a general improvement and his bad dreams disappeared. The subject's appetite and strength came back as well as a feeling of hopefulness. The breathing was constantly watched and monitored.

A long with this was a certain peace, absence from fear, lucidity, and a feel for life that included creating a rhythm for the process by controlling the breath and being aware of what would happen when the breath got out of control. More time was spent in Zen (involuntary) meditation in a certain void and peace of mind. Qigong helped in a most critical time when the subject became extremely cold and through artful practice of Qigong changed his own body temperature.

The unified use of the several complementary therapies stated above observably produced better results in this subject than would have occurred with routine administration of usual medications.

• • •

CORRESPONDENCE: Phillip Shinnick, Ph.D., M.P.A., Founder and Director; Simon Freed, Ph.D., Founder • Research Institute of Global Physiology, Behavior and Treatment, Inc. • 1070 Park Ave, New York, NY 10128

ACKNOWLEDGEMENTS: William Tiller, Ph.D.; Kenneth Sancier, Ph.D.; Patrick La Riccia, M.D. and B. J. Cling, Ph.D., J.O. for review of the manuscript and criticism. Robert Steinberg, Esq. for work in setting up the research Institute of Global Physiology, Behavior and Treatment, Inc. and its endowment from Dr. Freed. Thomas Monahan, Secretary of the State Boards of Medicine and Dentistry from New York, for help in creating my clinical research protocols in acupuncture during the 1980's. Mathew Lee, M.D., Director of the Rusk Institute, for sponsorship in acupuncture licensure. Xiao Yan for the preparation of the manuscript.

REFERENCES & NOTES

1. ___ O'Connor & D. Bensky, *Acupuncture a Comprehensive Text* (Shanghai College of Traditional Medicine, Eastland Press, Seattle, Washington, 1987), pp. 595.
2. D. B. Lindsley, The Reticular Activation System and Perception Integration, In *Electrical Stimulation of the Brain* (D. Sheer, Ed., University of Texas Press, Austin, TX, 1961).
3. K. H. Pribram, *Language of the Brain* (Prentice-Hall, Englewood Cliffs, New Jersey, 1971).
4. P. K. Shinnick, S. Freed, C. Blumenthal & Y. Omura, *The Heart* (The Heart Disease Research Foundation, 50 Court Street, Brooklyn, New York, 11201, 1990).
5. P. K. Shinnick & S. Freed, *Global Physiologic Correlates of Oriental Enlightenment (Samadhi, Satori) and Parallelism of an Analogous State* (1995, Unpublished).
6. S. Freed, Induced Specific Immunological Unresponsiveness and Conditioned Behavioral Reflexes, in Functional Isomorphism Meditation and Conditioned Specific Unresponsiveness, *International Journal of Neuroscience* **5** (1989), pp. 41-56.
7. B. K. Anand, G. S. China & B. Singh, Some Aspects of Electroencephalographic Studies in Yogis, *Electroencephalograph Clinical Neurophysiology* **13** (1961), pp. 451-456. Studies on Sri Rahahand Yogi During his Stay in an Air-tight Box, *Indian Journal of Medical Research* **49**,1 (1961), pp. 82-89.
8. A. Kasamatsu & T. Hirai, An Electroencephalographic Study of the Zen Meditation (Zazen), *Folio Psychiatrica et Neurologica Japonica* **20** (1966), p. 4.
9. H. Benson, *The Relaxation Response* (William Morrow & Co., New York, NY, 1975).
10. A. Alavi, P. LaRiccia, A. Sadek, A. Newberg, L. Reich, C. Lattanand & P. Mozley, Neuroimaging of Acupuncture in Patients with Chronic Pain, *Journal of Alternative and Complementary Medicine* **3** (1997), pp. 47-53.
11. M. H. M. Lee & M. Ernst, The Sympatholytic Effect of Acupuncture as Evidenced by Thermography, A Preliminary Report, *Orthopedics Review* **12** (1983), pp. 67-72.
12. S. Freed, Acupuncture as Therapy of Traumatic Affective Disorders and of Phantom Limb Pain Syndrome, *Acupuncture and Electrotherapeutics Research, The International Journal* **14** (1989), pp. 121-129.
13. S. Freed, Implication of Physiological and Behavioral States of Extremely Low Noise-levels for Acupuncture, *Acupuncture and Electrotherapeutics Research, The International Journal* (1989), pp. 61-89.
14. Y. Omura, T. L. Lin, L. Debreceeni, M. Losco, S. Freed, T. Muteki & C. H. Lin, Unique Changes Found on Qigong (Chi Gong) Master's and Patient's Body During Qigong Treatment: These Relationships to Certain Meridians and Acupuncture Points and the Recreation of Therapeutic States by Children & Adults, *Acupuncture and Electrotherapeutics Research, The International Journal* **14** (1989), pp. 61-89.
15. K. Bykov & W. H. Gant, *The Cerebral Cortex and the Internal Organs* (Chemical Pub. Co., New York, NY, 1957).
16. S. Freed, A Possible Basis for Effectiveness of Acupuncture Against Psychosomatic Disorders, *Acupuncture and Electrotherapeutics Research, The International Journal* **12** (1987), pp. 113-123.
17. P. K. Anokhim, Characteristic of the Afferent Apparatus of a Conditioned Reflex and Its Importance for Psychology, *Problems of Psychology* **6** (1955), p. 15.
18. M. S. G. Dyczkowski, *The Vibration of Power, the Aphorisms of Siva* (State University of New York, Albany, NY, 1992).
19. T. Hirai, *Zen Meditation and Psychotherapy* (Japan Pub., New York, NY, 1989).

20. P. Kapleau, *The Three Pillars of Zen Teaching, Practice and Enlightenment* (Anchor Books, New York, NY, 1980).

∞ ∞ ∞

APPENDIX I TREATMENT

DATE

SYMPTOM(S)

TREATMENT STRATEGY(TS)

ACUPUNCTURE POINTS(AP)

PROGRESS(P)

5/5/94 *

S Panting, cough, phlegm, weak 95.4°
TS Aid and secure source (Kidney) and strengthen Heart and Kidney
AP REN-4关元, 17膻中, 22天突. K-7复溜. S-36足三里. LI-4合谷, 11, Bi-13肺俞, H-8少府, K-27俞府. Moxibustion

5/7/94

S Panting, phlegm, fluid in lung, little urination
TS Relieve panting, suppress cough, eliminate phlegm
AP Bl-13肺俞. DU-22囟会. K-27俞府. LI-4合谷. H-8少府. Moxibustion

5/8/94

S Same symptoms, Panting, phlegm, fluid in lung, little urination
TS Same, Relieve panting, suppress cough, eliminate phlegm
AP H-8少府. K-27俞府. REN-17膻中, 22天突. LI-4合谷. Bl-13肺俞.
Moxibustion

5/10/94

S 95.4°F. Insomnia
AP P-3曲泽, 5间使, 6内关. H-8少府. REN-6气海. S-29归来. Bl-13肺俞, LI-4合谷 Moxibustion
P Big urination flow, less phlegm and blood in phlegm, moderate change in panting, some sleep, looks better

5/14/94

S 96.4°F. Some sleeplessness
AP Bl-13肺俞. H-8少府. REN-17膻中. K-27俞府, LI-4合谷 Moxibustion
P Insomnia improving slowly

5/16/94

S Phlegm, unstable, panting
TS Strengthen source
AP REN-3中极, 4关元, 6气海. S-39下巨虚. K-5木泉, 7复溜. Sp-9阴陵泉. K-27俞府. P-5间使, 6内关. H-8少府. P-3曲泽. Moxibustion
P Phlegm less, sleeping better for the first time

5/18/94

S More phlegm and adhering to side of throat, noisy lung like growling, no urination, fluid in lung, tinnitus after walk, dizzy.

TS Concentrate on breathing pattern

AP REN-9水分. S-28水道. K-7复溜, 5水泉. BI-58飞扬. Sp-9阴陵泉. REN-2曲骨, 3中极, 4关元, 6气海. BI-13肺俞. REN-22天突. K-27俞府. REN-17膻中. H-8少府. LI-4合谷. Moxibustion

5/21/94*

S Phlegm, panting, dizzy when lay down, stomach knotted, bad appetite and taste in mouth, edema in ankles.

Pulse strong and stringy

Uncoordinated breath-- exhalation jerky in three parts

TS Elementary breathing exercises

AP REN-13上腕, 15巨阙. DU-22囟会. S-36足三里. Liv-3太冲. Electrical stimulation (WQ-C2) Watching the breath for one hour

P Less phlegm, breath brought to quiet and zero intensity after exercise

5/23/94

S Diffuse Headache. Edema in right foot, left better. Breath opposite.

TS Watching breath with stomach going up.

AP REN-12中腕, 13上腕, 14巨阙, 22天突. K-9筑宾, REN-12中腕. Electro-therapy电疗 S-36足三里 to Liv-3 太冲(Bi-lateral.)

P Less phlegm, better sleep and breathing. Qi obtained at St-36.

5/25/94

S 97° Sleeplessness, mouth and gums dry, strange taste, headache, fatigue, legs swollen.

TS Massage legs

P Less phlegm, more warmth in abdomen, swelling in legs down after massage.

5/26/94

S Panting, legs swollen, phlegm with blood, inner mouth dry, Shen disturbances. Breath 1:2

TS Calm Shen

AP K-27俞府. H-8少府. LI-4合谷. S-36足三里 Moxibustion

P Breathing better ratio of inhalation to exhalation 1:3 ½ after acupuncture

5/27/94

- S Bedeviled sleep, one hour sleep
- TS Calm Shen
- AP S-36足三里. H-8少府. REN-13上腕, 14巨阙, 3中极, 4关元. K-27俞府, 5水泉, 9筑宾. Area acupuncture around xyphoid process.
- P Phlegm less, abundant urination, nose clear, breathing good.

5/29/94

- S 95.8° Good sleep, looks good
- P Urination moderate until late afternoon.

5/30/94

- S 97°F. Red eyes, some panting
- AP H-8少府. K-27俞府. Bl-11大杼, 12风门, 13肺俞, 14膈阴俞 (Bi-lateral) REN-17膻中. LI-4合谷. DU-22膻会.
- P Good urination, panting less, phlegm less sticky, nostrils free

6/1/94

- S 98°F. Sleeping with bad dreams
- TS Meditation at night and watching breath. Calm Shen
- AP Area acupuncture across occipital, paravertebral muscles from vertebrae C-3 to T-11 and medial ankle. Sp-6三阴交, K-7复溜.
- P Checks rosy, phlegm not building up

6/2/94 *

- TS Close attention to the breath. Sitting up at night meditating.
- AP Sp-9阴陵泉, K-5水泉, 7复溜. Bl-58飞扬. REN-2曲骨, 3中极. H-8少府. S-28水道. REN-17膻中. LI-4合谷. K-27俞府.
- P Cheeks rosy, sleeping better, good breath, lightness in air, posture better, eyes clear; phlegm went away for one day, slept through alarm.

6/4/94

- TS Deep breathing for 20 minutes induced 20 of deep sleep.
- AP S-36足三里. Bl-20脾俞, 23肾俞. Area acupuncture on left side-trapezius, scapula and paravertebral muscles from vertebrae C-3 to L-5 with gluteus minimus and piriformis Bi-lateral.
- P No phlegm, good sleep and urination, more heat in body. Deep sleep for one hour

6/6/94

- S 97.8° Phlegm in throat, foul mouth, no taste, forced eating, undernourished
- AP K-27俞府. Bl-13肺俞, 11大杼. GB-20风池, 21肩井. H-8少府. LI-4合谷. REN-12中脘. K-7复溜. Area acupuncture to solar plexus, xyphoid process, bladder and medial ankle.
- P Good heat. Respiration --- inhalation to exhalation 1:2, good. Ankle swelling down.

6/8/94

- S Hear water in lungs rattle, urinating at night, tongue reddish pitted in middle, constipation, and blood in sputum.
- TS Qigong, standing knees bent and arms in circle looking at floor through fingers one meter ahead. Arms move to side with alternating breath like shooting an arrow from a bow.
- AP S-36足三里. Bl-11大杼, 12风门, 13肺俞, 14膈俞, 41膈关. SI-9肩贞, 11天宗, 13曲垣.
- P Taste in mouth better. Drank more water, phlegm less, no dizziness, eyes open and bright, good nourishment,

6/10/94

- S Yesterday stomach very active, growling. Low energy, tongue wider.
- TS More meditation
- AP K-27俞府, LI-4合谷, 11曲池, Bl-15心俞, 44意舍. Area acupuncture to occipital, trapezius
- P Good sleep, good appetite, good color, low phlegm

6/12/94

- S Weak
- AP S-36足三里, 25天枢. K-9筑宾. REN-3中极, 6气海. Area acupuncture to around Bladder alarm point.
- P Good appetite, good color, good sleep, breathing good, less fluid in lungs. Slept during treatment.

6/14/94

- S Pitted red tongue, wider than on 3/15. Ugly taste.
- TS Zen meditation for long periods
- AP S-36足三里, 25天枢. K-9筑宾. REN-3中极, 4关元, 5. LI-4合谷, 11曲池.
- P Good color and fair appetite, no AM phlegm, good sleep. Editing journal and writing.

6/16/94

- S 97.4° F. Swollen ankles, status qu
- AP S-36足三里. K-9筑宾, 3太溪, 5水泉, 7复溜. REN-3中极, 4关元, 5石门, 6气海. LI-4合谷.
Area acupuncture across typhoid process in solar plexus, across occipital and right scapula
- P Good sleep. 20 breaths per minute.

6/19/94

- S 97.4° Stable
- TS More Qigong
- P Napping. Calm breath, legs not swollen