

Traditional Chinese Medicine--A Favored Adjunctive Therapy for American Cancer Patients

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In May of 1991, thirty-five alumni of the Commonweal Cancer Help Program gathered at Commonweal for one of our regular reunions. We sat together in a large circle for introductions. Each person gave his name, hometown, type of cancer, and a short list of resources that had proved particularly helpful. Participants described compassionate surgeons and oncologists, high-quality cancer support groups, and helpful psychotherapists. But the most commonly mentioned additional resource that the alumni talked about were practitioners of traditional Chinese medicine. One participant after another described how beneficial the acupuncture and herbal treatments were. They stressed particularly the value of Chinese medicine in coping with the side effects of chemotherapy and radiation.

I have suggested previously that spiritual, psychological, nutritional, and physical approaches to cancer represent a quartet of intrinsically open and ethical approaches to intensive health promotion in the face of cancer. Now I would like to add a fifth key approach to cancer. It differs from the quartet only in that it often contains elements that are not obviously intrinsically health-promoting. This fifth approach is found in the traditional medicines of the world.

When practiced with integrity by experienced practitioners, the traditional medicines of the world have often achieved highly significant benefits for patients. The World Health Organization recognizes these traditional medical systems as the primary providers of health care for much of the world. Although there are many different systems of traditional medicine around the world that have been developed over thousands of years of practice, I am choosing to describe traditional Chinese medicine because it is the traditional medicine best known in the West and the most widely used by Western cancer patients.

The Contrast Between Traditional Chinese Medicine and Mexican Alternative Cancer Therapies

Nowhere is the contrast in complementary cancer therapies greater than in the difference between how practitioners of traditional Chinese medicine have approached cancer and how some of the cancer clinics in the Tijuana area of Mexico--and others in the United States with similar medical cultures--have approached cancer.

Many of the Tijuana clinics make forceful claims that they can "cure" or otherwise effectively treat cancer in a high proportion of cases. They often denigrate conventional therapies as ineffective and harmful. They conduct little, if any, meaningful scientific research on their therapies.

Most practitioners of traditional Chinese medicine, by contrast, make modest claims for the efficacy of their cancer therapy. They often support the use of conventional cancer therapies. They offer treatments that are compatible with conventional therapies or that counteract the side effects of chemotherapy and radiation. Moreover, researchers in China, Japan, Hong Kong, and elsewhere conduct extensive research on virtually every aspect of traditional Chinese therapies--although not always to the standards that Western scientific medicine accepts.

If anything, most practitioners (there certainly are exceptions) of traditional Chinese medicine can--on the basis of the research literature--be criticized for understating the promise of their treatments for cancer. In fact, the practitioners of traditional Chinese medicine I have met in the United States and Japan usually go out of their way to minimize the potential of their therapies for cancer, except with respect to quality of life and alleviating side effects of treatment.

It was only when I began to undertake computer searches on the constituent parts of Chinese medicine that I began to discover the true magnitude of its clinical and research literature on cancer. I am not an expert on traditional Chinese medicine and the abstracts that are translated into English represent only a fragment of the total research effort, so I can offer only a preliminary sketch of this extraordinary literature.

Oriental medicine, of which traditional Chinese medicine is a part, constitutes a large and diverse field of practice, theory, and research. For example, the use of acupuncture and herbal therapies in Japan differs significantly from their use in China. There are also many different schools of traditional Chinese medicine within China, Hong Kong, and Taiwan. At the same time, a deep coherence of theory and practice exists even among the different schools. For the sake of simplicity, I focus primarily on traditional Chinese medicine as it is practiced in China, even though many of the studies I cite come out of Japan and do not strictly represent this school of practice.

English-Language Authorities on Traditional Chinese Medicine

Michael Broffman is an American acupuncturist who studied traditional Chinese medicine extensively in Taiwan. He works at the Pine Street Medical Clinic in San Anselmo--a town near Commonweal--and is one of the more sought-after traditional Chinese medicine practitioners in our area. Both a scholar and a practitioner, Broffman has many devoted cancer patients.

Among the English language authorities on traditional Chinese medicine that Broffman trusts the most are Paul Unschuld, author of *Medical Ethics in China* and *Medicine in China: A History of Ideas*; Nathan Sivin, author of *Traditional Medicine in Contemporary China*; and Ted Kaptchuk, author of *The Web That Has No Weaver*, one of the most accessible and beloved resources for Westerners who wish to understand traditional Chinese medicine, which is discussed below.

While practitioners like Broffman are using traditional Chinese medicine with cancer patients as an adjunct to mainstream treatments in communities across the United States, one academic medical researcher and physician is having a significant impact on the development of mainstream research in traditional Chinese medicine. David Eisenberg, M.D., of Beth Israel Hospital and Harvard Medical School in Boston, was the first U.S. medical exchange student to study in the People's Republic of China. He made a series of trips between 1979 and 1985 and wrote, with Thomas Lee Wright, one of the best and most fascinating introductory books on traditional Chinese medicine, *Encounters with Qi*; it reads like a novel. He is responsible for Harvard Medical School exchange programs with the Chinese Academy of Medical Sciences, and is actively encouraging the development of collaborative research programs on various aspects of traditional Chinese medicine involving Chinese and American scholars. He more recently updated his findings in a talk published in the *Noetic Sciences Review* called

"Energy Medicine in China: Defining a Research Strategy Which Embraces the Criticism of Skeptical Colleagues."²

Integrating Eisenberg's observations of traditional Chinese medicine with other studies, the following is an overview of its four major treatment approaches, each of which has applications to cancer:³

1. Acupuncture, which is known primarily in the West as a system of pain control, is regarded in Oriental medicine as a way of "restoring energy balance." Its practitioners, Eisenberg notes, speak of "putting energy through the needles" or "taking energy out of the body." Acupuncture posits a system of "meridians" which run like energy pipelines through the body. The acupuncture "points" where needles are placed are like valves on these energy pipelines where the energy can be adjusted.

2. Acupressure is a system of massage in which finger pressure on the acupuncture points is used in place of needles, both in diagnosis and in treatment. According to Eisenberg:

Claims of energy transfer were used by my mentors in describing what they were doing in diagnosing and treating patients on the massage table. I was impressed clinically by the extent to which patients with acute musculoskeletal pain and/or pain in association with chronic neurological or musculoskeletal problems found relief through massage therapy. More importantly, in many instances patients' relief was not short-lived, but rather lasted for days, weeks or months in a fashion I could not explain. These were among my most humbling observations."⁴

3. Herbal medicine, says Eisenberg, is "the principal mode of Chinese intervention." Most Westerners think of acupuncture as the primary system of traditional Chinese medicine. But over the past two millennia the Chinese have developed a vast pharmacopoeia of plant, animal, and mineral substances based on empirical and clinical experience.

4. Qi gong--energy medicine--is one of the most fascinating elements in traditional Chinese medicine. The physical movements of qi gong, which Eisenberg describes as "a martial art, are circular, symmetrical, and slow, and are similar to those movements used in other martial arts (such as Tai Chi Chuan and Kung Fu). However, in addition to the physical movements, the Qi Gong practitioner is instructed in the art of centering, of achieving a particular state of physical balance, and, simultaneously, to meditate."⁵ Some qi gong practitioners make intriguing claims about the capacities of qi gong practice to help people overcome cancer, as we shall see.

Cross-cutting these four major fields, Eisenberg offers a summary of five major (though unproven) assertions regarding the "energy medicine" aspects of the system:

1. Qi (vital energy) exists as a physical entity. The Chinese claim qi can be measured and controlled and has biological and clinical significance.

2. "Qi meridians" (energy fields) exist as physical entities. The Chinese claim that meridians are measurable, and necessary for pulse, tongue, and energy diagnosis. The meridians can predictably be influenced by acupuncture stimulation, herbal therapies, massage, qi gong, or other cognitive interventions.

3. Tongue, pulse, and energy diagnoses are reliable and may help to elucidate important physiologic relationships. The Chinese claim that subtle variations noted on the radial artery, the tongue, and along acupuncture meridians can reveal the location and severity of internal organ abnormalities.

4. Internal or external manipulation of qi can alter the course of illness. The Chinese specifically assert that qi gong therapy can alter illness patterns in malignant cancers, chronic diseases (e.g., renal failure, chronic obstructive pulmonary disease, arthritis, etc.), psychiatric disorders (such as anxiety, depression, and schizophrenia), and immunodeficiency (e.g., AIDS).

5. Paranormal (i.e., psychic) abilities are "qi-related" phenomena. A long-held Chinese claim states that persons who practice and become masterful at manipulating internal or external qi are capable of unique paranormal skills.⁶

The concept of qi, Eisenberg notes, is not unique to China. "It is found within the medical systems of Tibet, India, ancient Greece, branches of the Catholic Church, and also has similarities to more recent theories such as that of 'animal magnetism' proposed by Mesmer in the eighteenth century."⁷ In yoga, qi is referred to as prana, a vital life force that is preserved and enhanced by yoga practices. The Yoga Sutras also note that yoga practitioners may develop paranormal capacities, but sternly warn against pursuing these powers, which may distract the student from the real end of self-realization.

Like yoga, Oriental medicine systems primarily emphasize prevention as superior to intervention. Says Eisenberg: "It also emphasized that one's lifestyle, including diet, exercise, thoughts and emotions, plays a critical role in the natural course of illness and one's ability to maintain health."⁸

Eisenberg's account of traditional Chinese medicine has the advantage that it comes from a physician-researcher at Harvard who combines knowledge of traditional Chinese medicine with a rigorous commitment to Western research methods and standards.

A second major resource, mentioned above, for those who want to understand traditional Chinese medicine in more detail is Ted Kaptchuk's *The Web That Has No Weaver: Understanding Chinese Medicine*. In reading Kaptchuk's more extensive account after I had read Eisenberg's book, I found that it deepened my understanding of the fundamental concepts of traditional Chinese medicine. Kaptchuk has little to say about cancer per se, and does not discuss qi gong at length. He focuses on explicating traditional Chinese medicine in its own terms. Kaptchuk shows how fundamentally different are the Eastern and Western ways of seeing and thinking about life in general, and about medicine in particular:

The two different logical structures have pointed the two medicines in different directions. Western medicine is concerned mainly with isolable disease categories or agents of disease, which it zeroes in on, isolates, and tries to change, control or destroy. The Western physician starts with a symptom, then searches for the underlying mechanism--a precise cause for a specific disease.

The Chinese physician, in contrast, directs his or her attention to the complete physiological and psychological individual. All relevant information, including the symptom as well as the patient's other general characteristics, is

gathered and woven together until it forms what Chinese medicine calls a "pattern of disharmony.".... The question of cause and effect is always secondary to the overall pattern.⁹

Kaptchuk proceeds to discuss every major element of traditional Chinese medicine in depth. For cancer patients who want to understand exactly what a practitioner of traditional Chinese medicine is doing when you consult him, Kaptchuk makes this unfamiliar world comprehensible in detail.

Controlling Chemotherapy-Related Nausea

Before I begin to summarize pertinent parts of the research literature on traditional Chinese medicine, I would like to emphasize that I have access only to translated studies, have worked largely from abstracts of articles in the computer databases, and so cannot vouch for the design of many of the studies cited. Research design for traditional Chinese medicine studies in China is often sadly deficient by Western scientific standards.

The research on the uses of acupuncture and moxibustion (the application of heat to acupuncture points) strongly suggests that these treatments can be effective in controlling or alleviating vomiting and nausea related to chemotherapy; controlling or alleviating certain kinds of pain; alleviating side effects of radiation treatment, most notably edema; and possibly (the evidence is only from animal studies) in contributing to life extension. At the empirical level, as you read in my description of the Commonwealth reunion, many patients report obtaining relief from chemotherapy and radiation side effects with traditional Chinese medicine.

A controlled clinical trial was reported by J.W. Dundee in Belfast in the Ulster Medical Journal in which either manual or electrical acupuncture stimulation of the P6 (neiguan) point prevented nausea and vomiting. Control over nausea could also be obtained by acupressure, but not as effectively as by acupuncture. The author concluded that "acupuncture is a useful adjuvant in reducing sickness after cancer chemotherapy. This effect can be prolonged for 24 hours by acupressure."¹⁰

A similar study of the effectiveness of elasticized wrist acupressure bands to control chemotherapy-related nausea was reported by Stannard in Nursing Times. The study compared periods when the 18 patients undergoing chemotherapy wore the wristbands with periods when they did not wear them or had them incorrectly positioned. "When acupressure bands were used correctly, nausea remained but, in most cases, it was greatly reduced. Vomiting was reduced both in number of times and amount of emesis; some patients did not vomit at all. Antiemetic drugs were still needed, but the amount of drugs used was greatly reduced." The authors recommended a randomized controlled clinical trial, since the study was exploratory in nature.¹¹

Not insignificantly, sailors who are inclined to get seasick now frequently use these wristbands. They are on sale at almost every marine store--and sailors swear by them.

Controlling Pain

Acupuncture has the capacity, in the right hands, for controlling cancer-related or treatment-related pain. Many American cancer patients testify to the pain relief they have obtained with acupuncture. Eisenberg describes watching major brain surgery being done with acupuncture as the anesthetic. In spite of his initial reluctance, Lu, a 58-year-old Beijing University professor with pituitary cancer, agreed to have acupuncture analgesia during his surgery after he was assured that 90% of all head and neck surgeries at the Neurological Institute were performed successfully under acupuncture analgesia with fewer side effects than with other forms of analgesia.

Eisenberg then describes how Lu was first given a mild sedative by the staff anesthesiologist, who had 10 years of Western anesthesiology training before she ever learned acupuncture. The anesthesiologist selected six key points on the basis of the collective experience of the team of doctors in hundreds of similar operations. The points included two in the region of the eyebrows, two near the right temple, and two in the region of the left shin and ankle. The needles were connected to low-voltage electronic stimulating machines, often used in acupuncture, that sent electrical current through the needles at regular intervals. The anesthesiologist then waited 20 minutes for the acupuncture analgesic to take full effect.

Lu's head was held in a special metal frame to immobilize it for the surgery. A sterile sheet separated the surgeons and the operating field from Lu's field of vision: he could see only Eisenberg and the anesthesiologist:

The anesthesiologist gave the go-ahead to begin, and the surgeons took up their scalpels. They made an incision along three sides of the rectangle outlined by the marking pen, and proceeded to lift a three-sided flap of full-thickness skin from Lu's skull. At the moment of incision, Lu failed to wince, grimace or give any hint of pain. He remarked he was aware of the surgeons applying pressure to his skin but that he experienced no discomfort. His pulse and blood pressure remained at the preoperative levels.

Using high-speed bone drills with surgical bits, the surgeons bored holes through the four corners of the rectangular piece of bone. They threaded a wire saw between two adjacent holes and pulled it back and forth until the bone was sawed through. They repeated this procedure on all four sides of the rectangle until they could remove the large piece of bone. The manipulation of bony surfaces is usually extremely painful.

Throughout the entire procedure, which continued for more than four hours, Lu remained conscious, and his vital signs remained stable. We conversed the whole time he was on the operating table.

After the completion of the surgery, Lu sat up from the operating table, shook the hand of his surgeon, thanked him profusely, shook hands with the anesthesiologist and me, then walked out of the operating room unassisted. The large tumor had been removed, and it subsequently proved to be benign [emphasis added].¹²

Later, Eisenberg participated in two thyroid operations:

In certain respects these neck operations were even more impressive than Professor Lu's brain surgery. A thyroidectomy (surgical removal of the thyroid gland) requires an extensive dissection of the neck and is almost always performed with the patient under general anesthesia. In the thyroid operations using acupuncture analgesia, no drugs whatsoever were administered. The analgesia consisted of two needles in the hand and nothing else.¹³

Eisenberg and Wright point out that although acupuncture is 3,000 years old, its application to surgery is very recent, since surgery played a very minor role in traditional Chinese medicine. It began to be applied to surgery when Chairman Mao called for the union of Chinese and Western medicine. Research showed that while acupuncture provided successful analgesia for 90% to 95% of head and neck surgeries, it was "only" successful in 70% to 80% of abdominal, gynecological, and chest surgeries. It could not relax the abdominal muscles in abdominal surgery or block pain related to the movement of internal organs. By the 1980s, Eisenberg reports, Chinese anesthesiologists were using acupuncture primarily for head and neck surgeries as a result of these findings.¹⁴

Kondo, in Nagoya, Japan, points out another aspect of the significant potential of acupuncture analgesia in cancers of the head and neck:

Deterioration in the patient's general condition in cancer of the head and neck is slow in comparison to the extent of local disease. Counter-measures against pain, therefore, become very important in treating these patients. Cancerous pain may be divided into three stages, i.e., the early, middle and terminal stages. Acupuncture is effective for early and middle stage pain and has a pain-relieving effect which is different in type from the relief gained by other analgesics.¹⁵

A review article from the former Soviet Union on the treatment of advanced cancer pain considered analgesic drugs, radiotherapy, nerve blocks, surgery, and acupuncture as pain relief methods. "Acupuncture has been found to have certain advantages over nerve block," the authors concluded.¹⁶ A case report from Leningrad described three women with metastatic breast cancer confined to bed with severe pelvic pain. They were given acupuncture "which resulted in complete alleviation of pain and restoration of mobility."¹⁷

There are many more Chinese, Japanese, and Russian references to the use of acupuncture analgesia than there are American references. While some American studies clearly describe the efficacy of acupuncture in pain control, acupuncture analgesia is more typically discussed under "unproven methods" or "unusual methods" in discussions of the management of cancer pain.

No one knows precisely how acupuncture analgesia works. Eisenberg reports one of the leading hypotheses:

Over the past few years scientists have discovered that acupuncture stimulates the production of certain morphine-like substances in the brain. These substances diminish pain perception. The newly discovered compounds are called endorphins or enkephalins. They are small chains of amino acids that serve as neuromodulators, that is, regulators of neurological activity. There is evidence that acupuncture influences the production and distribution of a great many neuromodulators and neurotransmitters and that this in turn alters the perception of pain.¹⁸

Controlling Radiation-Induced Injuries

Edema caused by radiation treatment is one of the most vexing ongoing problems for many cancer patients,

particularly those with breast cancer. A considerable number of studies, mostly from Russia, report on the value of acupuncture as part of an integrated approach to managing pain and edema and restoring immune function after radiotherapy.

An uncontrolled Soviet study by Bardychev of acupuncture and reflexotherapy for 141 breast and uterine cancer patients with late-onset radiation injuries to skin and soft tissue found that acupuncture was "an effective treatment for edema and pain. It also improved lymph flow, rheovasographic indexes and normalized hemostasis. The best results were obtained in stage I-II edema."¹⁹ Another uncontrolled Soviet study by Kuzmina found that radiation edema was decreased 22% to 37% and immunological recovery was enhanced using laser acupuncture in conjunction with massage, application of DMSO (dimethyl sulfoxide, an anti-inflammatory), and routine drug therapy.²⁰

Animal studies also support the benefit of acupuncture in enhancing immune function following radiation. A Taiwanese study of gamma-irradiated mice showed that handling acupuncture, electroacupuncture and laser acupuncture enhanced recovery of total leukocytes and differential white blood cells in the mice, with laser acupuncture having the greatest effect.²¹

Extending Survival with Cancer: Animal Studies

While most traditional Chinese medicine practitioners are extremely cautious with regard to any claims that acupuncture or other modalities may extend life, some animal studies suggest it might play a role in life extension. For example, an Israeli study looked at the effects of moxibustion in transplanted mouse breast carcinoma. The mouse breast tumors were surgically removed with and without the application of moxibustion. The protective effect of the moxibustion was remarkable:

Surgical removal of the tumor 14 days after inoculation resulted in the deaths of 61% of the mice, compared with a 90.0% death rate in a sham operation, but only 37.5% with the addition of thermo-moxibustion therapy. Surgical removal of the tumor mass at day 17 post-inoculation resulted in a 70% mortality rate, while surgery supported by thermo-moxibustion protected the animals to the range of 40% mortality. Thermo-moxibustion as the sole treatment was effective when applied either before or very close to the tumor cell inoculation (35% and 33% mortality respectively, as compared to 61.7% in the control).²²

Similar results were obtained in a study of the effects of combining radiation treatment and acupuncture-moxibustion in mice with subcutaneous Ehrlich ascites tumor: the group treated with moxibustion and electroacupuncture had the best therapeutic results while, interestingly, the group given electroacupuncture alone had no significant clinical results.²³

Another provocative animal study from China looked at the effect of acupuncture on the growth of Ehrlich ascites tumor in mice who had been inoculated with the tumor cells. The mice who had acupuncture showed a slower weight gain than controls, "indicating the growth of tumor cells was inhibited in a certain degree by acupuncture treatment." Also, the treated mice survived a median 25 days compared to control survival of a

median 16 days.²⁴

Herbal Therapies for Cancer

Although I have focused up to this point on acupuncture, moxibustion, and acupressure, the scientific literature on traditional Chinese herbal therapies is even more intriguing. It is important to remember Eisenberg's point that, contrary to American preconceptions, herbal therapies, not acupuncture, are the principle remedies in traditional Chinese medicine. As you read the often astonishing claims for the herbal remedies, keep in mind two thoughts: first, clinical trials in China are frequently not randomized controlled clinical trials. And even when they are, the methodology is often suspect by Western scientific standards. So the human trials reported below should be seen as suggestive and intriguing but by no means definitive.

On the other hand, it is important to note Kaptchuk's suggestion that traditional Chinese herbal therapies may often be more effective in traditional clinical combinations than when single components are isolated in Western scientific analysis and then simply administered as new chemotherapeutic agents in conventional medical practice. So while poorly designed studies may overstate the potential benefit of traditional Chinese herbal remedies in some respects, the transformation of elements from ingredients in a complex holistic traditional medicine to pharmacological agents in a Western medical system may cause us to underestimate the benefits of the intact traditional therapies.

With these cautions, it is important to recognize that traditional Chinese herbal therapies have already yielded a significant number of anticancer drugs, including indirubin from dang gui lu hui wan, irisquinone from *Iris lactea pallasii* and Zhuling polysaccharide from *Polyporus umbellata*.²⁵ There is no question that the ingredients of many traditional Chinese herbal remedies are pharmacologically active in cancer. According to an extensive analysis by Eric J. Lien and Wen Y. Li at the University of Southern California School of Pharmacy, Chinese herbs and plants from 120 species belonging to 60 different families have been used to treat cancer. Their highly technical text, *Structure Activity Relationship Analysis of Anti-Cancer Chinese Drugs and Related Plants*,²⁶ groups the drugs according to their bio-organic structure and chemistry and gives each plant's name, the active biochemical principle it contains, and the research evidence for its specific anticancer activity.

The Promise of Juzentaihoto

Juzentaihoto, or JT-48 or JTT, which is spelled and labeled variously in different translations, appears to be one of the most thoroughly studied and promising of Chinese herbal remedies. Its traditional use was in anemia, anorexia, and extreme exhaustion and fatigue. Researchers now suggest it "may now provide new advantages with little toxicity in combination with chemotherapy or radiation therapy [as well as] preventing leukemia in cancer patients who take antitumor agents."²⁷

Juzentaihoto has been reported to be effective against the toxic side effects of the chemotherapy cis-

diamminedichloroplatinum (CDDP) in mice with bladder tumors, inhibiting tumor growth and prolonging survival.²⁸ It has been reported to be protective in animal studies against the side effects of the chemotherapies mitomycin C and cisplatin and "markedly changed survival curves" for the animals, suggesting that the herbal therapy "may be a new way to prevent or minimize the toxicity" of both chemotherapies.²⁹ It potentiated a combination of chemotherapy and hyperthermia in mice with experimentally induced sarcoma tumors, while reducing or eliminating the chemotoxicity of mitomycin C.³⁰

Juzentaihoto also helped strengthen the biological recovery of mice following radiation treatment.³¹ It enhanced immunological and fatty metabolic parameters in postoperative patients with gastrointestinal cancer, causing a "remarkable elevation" in natural killer cell activity.³² It also was reported to extend survival in a randomly controlled clinical trial with advanced gastrointestinal cancer patients. Patients given the herbal remedy had 3- to 10-year survival rates, "significantly higher than commonly anticipated." Patients who received palliative surgery were given a combined herbal therapy said to "strengthen the patient's resistance and dispel the invading evil" in combination with chemotherapy. Control groups were given one of two chemotherapy regimens, 5-fluorouracil (5-FU) or MMF. "The combination of traditional Chinese medicine with chemotherapy was better than chemotherapy regimen alone Immunological studies of the survivors revealed an enhancement of both humoral and cellular immunity."³³

Finally, and most important, the herbal therapy in combination with chemotherapy and hormonal therapy was reported to have extended life and improved quality of life for metastatic breast cancer patients. In a controlled clinical trial at the National Cancer Center Hospital in Tokyo, advanced metastatic breast cancer patients were given either chemotherapy and endocrine therapy alone or in combination with juzentaihoto. There were 58 patients who could be evaluated in the group receiving the herbal remedy and 61 in the control group. The survival curves were not significantly different for the first 38 months of the study, but beyond that the survival rate was significantly higher in the group receiving juzentaihoto. Quality of life was also better for those receiving the herb, including physical condition, appetite, and coldness of hands and feet. Herbally treated patients also were protected from bone marrow suppression associated with chemotherapy. The authors at the National Cancer Center Hospital concluded, "Treatment with Juzentaihoto is better than without Juzentaihoto in treatment for advanced breast cancer patients."³⁴

Other Human Clinical Trials with Traditional Chinese Herbs

A prospective randomized controlled clinical trial at the Chinese Academy of Medical Science in Beijing in 1989 combined a traditional Chinese herbal remedy with radiation in nasopharyngeal carcinoma (a cancer of the pharynx) and reported a striking increase in survival, as well as reduced local recurrence in the herbally treated group. Ninety patients were given a well-known "destagnation" herbal remedy (to disperse stagnant blood) with radiotherapy, while 98 controls received radiotherapy alone. The 5-year success rate (measured in this study as the number of patients surviving minus the number with recurrences salvaged by retreatment) was 53% in the herbally treated group vs. 37% in the control group--a statistically significant result. The herbally treated group also had far fewer local recurrences (14% vs. 29%), but the metastatic rate for both groups was the same (21%). The last finding was welcomed by the researchers because it seemed to refute the belief that destagnation promotes

the spread of cancer by circulating blood.³⁵

A 1989 Chinese clinical trial on squamous cell carcinoma of the esophagus showed two herbal therapies to be superior to chemotherapy, according to histological analysis of tumor tissue, but the study did not assess survival. The study compared three types of traditional Chinese herbal medicines in 42 patients given the herbs together with cyclophosphamide (a chemotherapeutic agent) prior to surgery with 100 patients who received only surgery. Examination of surgical specimens from all patients were then studied. The researchers found that infiltration of lymphoid cells into tissues and cancer tissue degeneration were more prominent in patients treated with the herbs *Menispermum dehuricum* D.C. or *Chelidonium majus* L., and were less clear in patients treated with the herbs plus chemotherapy or surgery alone. The author commented that the herbal treatments may work by activating an immunological rejection mechanism, while the chemotherapy may diminish the immunological response of the host without obviously damaging the cancer tissue.³⁶

Another 1989 Chinese study (not a controlled trial) assessed combining conventional and herbal therapies for small cell lung cancer and reported extended survival, apparently in comparison with published survival statistics. The authors conclude that "by long-term combined modality [chemotherapy, radiotherapy, immunotherapy, and unspecified Chinese herbs], the survival rate has obviously improved and the possibility of cure has evidently increased."³⁷

Still another uncontrolled Chinese clinical trial assessed combining chemotherapy and herbal therapy in liver cancer and showed good short-term results. Thirty patients were given the herbal immunostimulator *bai nian le* in combination with the chemotherapies levamisole and cimetidine. The authors reported increased natural killer cell activity with "expansion of tumor mass checked and with clinical conditions obviously improved."³⁸

Astragalus membranaceus and Ginseng

A 1990 study at the Department of Clinical Immunology and Biological Therapy at the University of Texas System Cancer Center in Houston and the Chinese Academy of Medical Sciences in Beijing found that a fractionated extract of the herb *Astragalus membranaceus* increased the anticancer activity of killer cells potentiated by the well-known experimental substance, low-dose recombinant interleukin-2. The study found a "10-fold potentiation" of the interleukin activity when it was used in combination with the herbal extract. Used with the herbal fraction, a smaller and far less toxic dose of interleukin had the same tumor cell killing activity as a dose ten times larger when used alone. The authors pointed out that high-dose recombinant interleukin-2 has proved excessively toxic and that future work with the substance may require strategies to potentiate lower doses. An extract from *A. membranaceus* has that potentiating capacity.³⁹

A second study using a fraction of the same herb (fraction F3) showed that the fraction reversed the immunosuppression caused by the chemotherapy cyclophosphamide and represented a "rational basis for the use of *Astragalus* in immunotherapy."⁴⁰

A 1989 Japanese study of an extract from *Panax schinseng* found that the substance inhibited growth of liver

cancer cells in culture and stimulated protein synthesis in these cells, "thus converting the cell characteristics both functionally and morphologically to those resembling original normal liver cells. We have called such a phenomenon 'reverse transformation' or 'redifferentiation' which can be regarded as decarcinogenesis. In this report, the results of our recent investigations are presented with particular reference to reverse transformation of B16 melanoma cells induced [by the ginseng extract]."41

This kind of redifferentiation of cell lines toward the structure and function of healthy cells is also caused in certain cell lines by specific nutrients, as we saw in chapter 12.

Traditional Methods of Treating Cancer with Chinese Herbs

In real life, of course, most practitioners of traditional Chinese medicine do not make use of the scientific studies. Indeed, most practitioners in my experience are largely unaware of how remarkable the scientific studies are; they simply offer what they have learned to be the most appropriate therapy for the patient's particular situation.

One interesting but, some specialists report, somewhat dated book on the traditional system of cancer treatment with traditional Chinese herbs is *Treating Cancer with Chinese Herbs*, by Hong-Yen Hsu. Hsu headed the Taiwan Pharmaceutical Association for 34 years and served as the chief of the Food and Drug Control Bureau of the National Health Administration in Taiwan, as well as chairing the department of botany at a Taiwan university before founding the Oriental Healing Arts Institute in Los Angeles. In classic Chinese medicine, Hsu says, there is no specific concept of cancer. Some tumors are simply considered more dangerous than others:

Those that can be cured are probably Western medicine's equivalent of a benign tumor. The Chinese have perfected over the years many, many formulas that reduce or arrest swelling and alleviate pain. They have also learned much about nutrition and are extremely aware of the benefits to be derived from nutritive supplementary tonics. These are the medicines that are discussed in this book. The formulas and herbs don't propose to cure cancer as such, but many of them do alleviate pain and prolong life by supplementing and strengthening the body's life force and by arresting the progression of tumors.⁴²

The various herbal remedies for different types of cancer are said to work by circulating the blood and dissipating "stagnation," detoxifying and "dissipating hard lumps," "breaking accumulations," "treating coagulation," "treating weak vitality," "dispersing heat," and so forth.⁴³ Beyond the many specific remedies for different types of cancers and different individual conformations related to cancer, Hsu recommends two general anticancer remedies: the "C-C Combination" and the Japanese formula "W.T.T.C."⁴⁴ He cites studies by Nakayama Koumei of Chiba University in Japan showing that W.T.T.C. enhanced postsurgical survival in patients with esophageal and stomach cancer by about 10% and enhanced relapse-free survival by larger amounts, although "the data base is not sufficiently scientific."⁴⁵

A sense of the Chinese view on specific cancers can be sampled by reviewing the chapter on breast cancer. After reviewing the Western view of breast cancer, Hsu describes Chinese thinking:

The general Chinese medical view is that women's breast cancer is caused by the accumulation of melancholic anger, depression, obstruction of spleen vitality, reversal of liver vitality, deficiency of blood and vitality, stagnation of blood in the muscles, accumulation of sputum over several years, and internal bursting. Thus breast cancer is linked to the seven passions and the exhaustion of blood in the liver meridian, the melancholic accumulation of liver vitality, and obstruction of ch'i [Qi, vital energy].

Chinese medical treatment during the initial stage is aimed at detoxifying, relieving melancholy, softening the hardness, supplementing the blood, and dissipating stagnant blood.⁴⁶

Hsu then gives numerous specific herbal formulas, which have ingredients like "ten baked fresh crab shells" and "juice pressed from fresh asparagus taken with yellow wine." One of my favorites from a purely lyrical point of view recommends:

Equal portions of wasp's nest, stools of a male rat, and melia are lightly baked and ground into powder for treating bursting. This powder is spread on the cancerous site.⁴⁷

Broffman suggests that while the diagnostic sections of Hsu's book remain valid, the herbal formulas for cancer treatment have changed with time and research.⁴⁸

Two more recent texts recommended by Broffman are *The Treatment of Cancer by Integrated Chinese-Western Methods* by Zhang Dai-zhao, and *Chinese Herbal Therapies for Immune Disorders* by Subhuti Dharmananda.

Dharmananda's book outlines a treatment strategy for tumors that a practitioner of traditional Chinese medicine might employ. It uses traditional Chinese herbs to protect, restore, and enhance the immune system; antitoxin therapies, preferably selecting those herbs containing alkaloid components that have antitumor activity; a mass-resolving (tumor-resolving) formula, used even in conjunction with Western therapies, since the Western treatment will eventually convert the malignant mass into a mass of dead tissues, much like an abscess that is ready to burst; and adjunctive therapies to treat specific symptoms, such as nausea, that accompany a Western therapy. The first three steps are followed throughout the period of cancer therapy. When the tumor is resolved, the immune-enhancing therapy is maintained for a period of several weeks to assure complete normalization of the body functions. The adjunctive therapies are used only as required by the presence of symptoms. The therapeutic plan is followed for a brief period (e.g. 1 month) every 6 months for the purposes of preventing the recurrence of tumors.⁴⁹

Zhang Dai-zhao has written an accessible book that includes specific formulas for use by practitioners of traditional Chinese medicine. His section on breast cancer, for example, differentiates and classifies three different kinds of breast cancer: "Qi stagnation due to liver depression," "phlegm dampness due to spleen deficiency," and "stagnant toxins." Each type of breast cancer is characterized by a different clinical picture and requires a different therapeutic strategy. Each requires a different common herbal prescription.⁵⁰

Qi Gong

Qi gong is the most mysterious of all the major components of traditional Chinese medicine and is possibly the oldest and most important of the martial arts. Says Eisenberg:

The practice of Qi Gong involves some of the key elements found in Western relaxation training. These include paying attention to one's breathing, establishing a passive disregard toward one's thoughts, and--unique to Qi Gong--instructions in techniques to sense the source of one's Qi (vital energy) at a point below the navel and to learn to move it through one's body.

It is said that anyone can learn Qi Gong exercises and that it takes approximately three to six months before one can "feel one's Qi" (in the form of heat or fullness) and begin to move it at will.

The practice of Qi Gong, when analyzed from a Western perspective, may be thought of as a combination of behavioral techniques. These are typically performed for 30 to 60 minutes every day of the year. The behavioral components of Qi Gong include the elicitation of the relaxation response and/or other aspects of relaxation training, aerobic exercise, progressive muscle relaxation, guided imagery, and elements of the placebo effect. In China, where an estimated 50 million persons practice Qi Gong every day, there is an unprecedented opportunity to investigate the impact of behavioral (that is, non-pharmacological, cognitive) therapies as they relate to a multitude of illnesses.⁵¹

The most reassuring thing to notice, as Eisenberg points out, is that the basic practice of qi gong, like the basic practice of yoga, involves the practitioner in a "behavioral package" of health-promoting practices that have been tested and refined over thousands of years.

The concept of qi is central to Chinese medicine and numerous other traditional medicines. It is the prana of yoga: the vital charged energy of feeling alive that many sensitive people and any moderately regular practitioner of a psychophysiological discipline comes to know as an experiential truth. This qi or prana is often depleted by excesses in the activities of life: excessive sexual intercourse, excessive eating, excessive time in front of the television, excessive work, excessive talking. These and many other activities, especially if undertaken in an unbalanced psychological state, deplete prana or qi. Ordinary people can feel the reality of this statement--not just the Chinese, but Westerners who learn to notice these things. Subjectively or experientially, the reality of qi is profoundly experienced by millions of people.

The problem is that scientifically we still do not know what qi really is, although that is one of the most intriguing questions on the frontier of scientific "energy medicine." According to the Chinese view, Eisenberg explains:

"Qi" is said to be that which differentiates the animate from the inanimate. The body is viewed as a complicated series of conduits through which the "Qi" flows. These conduits are the acupuncture meridians referred to in Chinese diagrams depicting human anatomy. Pathogenesis relates to the excess or deficiency inextricably linked to the force of Yin ("female," "cold," "hollow," etc.) and its opposing force, Yang ("male," "hot," "solid," etc.)

The Chinese clinician's task is to identify where the Qi exists in excess or is deficient. This is done chiefly by

means of taking a history, observing and using pulse and tongue diagnosis. The diagnostic label used by the Chinese clinician refers to the specific imbalance which has been noted on physical examination. Each therapy, whether it includes needles, herbs, changes in diet or meditation, is aimed at reestablishing the balance of Qi.

There is one more point of traditional Chinese terminology which is worth remembering. "Internal Qi Gong" or "Soft Qi Gong" refers to an individual's ability to sense and move his/her own Qi within his/her own body. "External Qi Gong" or "Hard Qi Gong" refers to the (alleged) ability of some Qi Gong practitioners to emit their Qi externally so as to influence other animate or inanimate objects.⁵²

This is the precise point at which we move decisively into an area which requires suspension of disbelief for many Westerners. As Eisenberg describes it: "These individuals claim to have practiced qi gong from early childhood and proudly displayed their seemingly supernatural powers to audiences as large as 50,000 persons. Qi gong masters split stones with their hands and their foreheads, had trucks driven over them, had massive stone slabs lowered on their bodies by cranes, claimed to be able to see within human bodies and to move inanimate objects at will."

When they were "emitting qi" some research studies claimed to have documented heat changes in the skin surface of practitioners:

Thermally sensitive films suggested that when Qi Gong masters emitted energy, the energy tracked down lines in the forearms and legs which were similar to classical acupuncture meridians.

A second series of publications were more fantastic still. Professor Feng Li Da of Beijing published an article pertaining to the predictable change of bacterial cell growth in response to external Qi emission by Qi Gong masters. Her paper reported on the ability of several Qi Gong masters to increase or decrease bacteria cell growth in a variety of common bacteria. Dr. Feng claimed to have replicated these experiments on numerous occasions in multiple laboratory settings and seemed confident of her results [emphasis added].⁵³

The literature on Therapeutic Touch, described in chapter 18, gives us some sense of the scientific basis for these claims. In Therapeutic Touch, even under carefully blinded conditions, practitioners who, like qi gong masters, did not touch the patient, envisioned themselves transmitting vital energy into the patient. Test results showed that Therapeutic Touch brought about physiological changes in the patient. But qi gong goes far beyond Therapeutic Touch. While attending a conference in Beijing in October 1988, Eisenberg invited a qi gong master to his hotel room:

He came equipped with an electrical volt meter and a simple wiring device. The device was no more than a plug attached to two wires with live ends. He put the plug in the wall and demonstrated its current by lighting lightbulbs, and then tested the current on his hand-carried volt meter. He then licked his thumb and forefinger of both hands and grasped the two live wires. I was horrified and worried he would quickly be electrocuted. He was not. Moreover, he convinced me that he could light a lightbulb by touching it with other fingers of both hands. More curious still was his ability to regulate voltage across his hands, at will, simply by touching the volt meter with the ground in one hand, the meter device in the other. On several attempts he regulated the voltage from 0 to 220 volts, or held the voltage constant, at will, upon my request.

Because I have grown increasingly skeptical of such provocative claims, I asked him how I could be certain he was in fact conducting electricity and not simply fooling me by means of some high technology trick. He offered to touch me with his hands while he was connected to the wall socket. I declined, but a colleague with me at the time volunteered. When touched on the shoulder by the Qi Gong master, my colleague's trapezius and biceps muscles went into spasm. Moreover, the Qi Gong master could control the electrical current so as to induce the spasm or not. I allowed the Qi Gong master to touch me for a split second, long enough to feel the live current emanating from his forefinger. He was "live" all right.⁵⁴

As a final proof, the qi gong master produced two metal skewers and a pork chop, which he cooked on the skewer by means of the electrical current running through his hands. "I was astounded," said Eisenberg, "and have no adequate explanation for why the qi gong master did not injure his skin or cause a serious heart irregularity, seizure, or other damage to his person."⁵⁴

These stories, however well vouched for by multiple observers, would be of no great moment for us were it not that qi gong is regularly used to treat large numbers of biopsy-proven malignant cancer patients. They are treated with a combination of internal and external qi gong. Qi gong is also used as a treatment for a variety of other illnesses, typically chronic neurologic and musculoskeletal diseases, including multiple sclerosis.

One medical account of the use of qi gong in cancer is a study by Meizhen Gao and Yongmo Liu, of Hunan Medical College. Their subject is a new approach to qi gong taught by the late Guo Ling, a famous qi gong master who was reported to have had cancer of the uterus and undergone six operations without recovery, and who then "began to probe ways of modifying Qi Gong to cure her own disease." She reportedly recovered from cancer using her "new qi gong" method, which she has taught to many advanced cancer patients in Beijing with "significant results."⁵⁵

Meizhen Gao, one of the authors of the study, is a physician who was cured of severe insomnia using "new qi gong" and then proceeded to coach four cancer patients. "These results were astonishing. At this writing, three of the four have survived for more than seven years." The cases included a 31-year-old woman with lung carcinoma (biopsy- and x-ray-confirmed) who was treated with radiation therapy in November 1979. She returned for treatment with an abdominal mass for which she received additional radiation in April 1980, and began practicing "new qi gong" in May.

There was improvement of general well-being after four months of practice. Then the patient switched to another type of Qi Gong in October. By April, 1981, her general condition deteriorated with reduction in physical strength, as well as loss of appetite and weight. Chest films showed multiple patchy shadows of various densities in both lung fields in addition to the original shadow. Blood streaks were found in the sputum. She resumed and has continued practicing Quo Ling's Qi Gong since May 1981. Chest [films] show absorption of the shadows in both fields and the original tumor shadow is no longer evident. There was a thickening of the pleural shadow in the left superior mediastinal region. Chest films taken in September 1984 showed no evidence of recurrence. She was living and well during a recent follow-up visit in October 1986.⁵⁶

The second case was that of a 50-year-old man diagnosed in April 1979 with adenocarcinoma of the right lung, grade II, with metastases to adjacent lymph nodes. He received radiation therapy and two courses of

cyclophosphamide. After starting "new qi gong" his condition and appetite improved and edema in the legs subsided. In October 1986 he was alive and well.

The third case was that of a 37-year-old woman diagnosed in September 1978 with lymphosarcoma of the mediastinum (the tissues separating the two lungs) with metastasis to the bone marrow and distant lymph nodes. She received chemotherapy and began to practice "new qi gong" in July 1980. Follow-up x-ray films showed the tumor shadow no longer visible, and she was alive and well in July 1986.

The fourth case was that of a 49-year-old woman diagnosed in November 1981 with inoperable metastatic adenocarcinoma of the lung who was discharged without treatment. She began to practice the "new qi gong" in November 1981. Chest films in January 1982 showed a reduced shadow in the lung, and the cough and other symptoms had disappeared. "Her family did not tell her the true diagnosis [and] consequently she stopped practicing Qi Gong after her symptoms subsided. Her condition rapidly deteriorated, and she became bedridden. She was unable to resume Qi Gong therapy and died in October 1982."

In their discussion of these four cases of advanced cancer with distant metastases or recurrences, in which the patients were apparently not cured by conventional therapies, the authors note that three patients survived more than 7 years with roentgenologic evidence of reduction or disappearance of the tumors. They also observed that the most outstanding common effect of qi gong was the improvement in the general condition of the patients, as evidenced by increase in appetite, gain in weight, increased vigor, better physique, and increased activity. Further, according to the authors, qi gong appears to have a significant effect in promoting rapid recovery from adverse reactions to chemotherapy and radiotherapy such as lassitude, nausea, vomiting, loss of appetite, hair loss, loss of weight, and reduction in the number of leukocytes and platelets. They inferred that the effect of qi gong is not specifically anticancerous, but improves the patient's ability to deal with the cancer by mobilizing and regulating the vital energy.⁵⁶

We should not be surprised that these physicians insist that it is essential that qi gong be practiced in precisely the right way--that it only works if it is the "new qi gong" and that a patient began to fail on some other form of qi gong. It is characteristic of most practitioners of health-promoting psychophysiological disciplines--or purely psychological or purely physical therapies--that they often believe that their unique approach is the only one that is effective. Perhaps their belief in the unique benefits of their approach is part of what makes them effective with specific patients. Or perhaps in some cases, such as qi gong, only one kind of qi gong is effective and other kinds are much less so. We simply do not know. But, as a general rule, we know that many of the unusual cancer remission stories involve spiritual, psychological, nutritional, and physical approaches to cancer in widely differing combinations with widely differing specifics.

Conclusion

Traditional Chinese medicine is, in my judgment, one of the most intriguing of the adjunctive therapies for cancer. There is considerable evidence for its benefits in pain control and in alleviating the side effects of chemotherapy and radiation therapy. Patients frequently report these benefits, as well. There are also some reasons to believe

that traditional Chinese medicine may help in the battle to extend life with cancer and to lower the risk of recurrence of cancer.

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