Preliminary Exploration of New Treatment Mode of Traditional Chinese Medicine and Western Medicine Supplement for Tumor Patients

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Abstract

Traditional Chinese Medicine (TCM) is commonly employed in Chinese cancer centers, although formal scientific examination of this practice is still in its infancy in the Chinese cancer community. TCM practitioners and cancer patients’ viewpoints and experiences were examined in the first step toward establishing a clinical assessment of TCM for use in treating cancer patients. Inductive theme analysis was performed using text transcripts and field notes. As a result of our research, we discovered that patients’ decisions to employ TCM for cancer treatment are self-help processes rooted in the ancient Chinese concept of life. TCM was seen as a safe and effective treatment by participants. They regarded TCM’s ability to personalize therapy to individual patients as a key component of safe and effective care. In addition, participants cited TCM’s long-term benefits, the advantages of group therapy, and its cheap cost as crucial aspects. Clinical research, according to participants, is critical to the acceptance and spread of TCM in the West. We believe that the results of this study will add to our understanding of how TCM is currently being used in China to treat cancer, as well as give information for future clinical studies in the West.

Keywords

Traditional Chinese Medicine, Western Medicine, Tumor, Treatment

1. Introduction

1.1 Background

Treatments for cancer using TCM are quite widespread in Asia. In China, TCM is a separate medical profession from complementary and alternative medicine (CAM). When compared to Western Medicine (WM), it takes a distinct approach to understanding health and illness. When it comes to cancer treatment, Chinese medicine emphasizes restoring the body’s equilibrium and increasing the body’s defense mechanisms (immunity) in addition to certain cytotoxic herbal remedies. Patients, particularly those in the East, are more likely to undergo both therapies [1].

Treatments such as acupuncture, herbal medicine, and moxibustion may all be used to alleviate the symptoms of chemotherapy and radiation treatment. This, however, raises questions about drug-herb interactions and toxicities in combination therapy. Acupuncture, moxibustion, food therapy, Chinese medicine medicinal decoction recommended, single Chinese medicine herbal or supplements, and Tai Chi are some of the most often utilized therapeutic techniques in Chinese medicine. Cancer patients in the East and the West are increasingly taking use of Chinese medicine, although physicians often challenge the scientific evidence for its safety and effectiveness. Various Chinese medicine methods for cancer management in the East and West are examined here [2].
TCM may be used in conjunction with WM to improve cancer patient care. Although TCM is generally used as a whole, current reductionist research indicates mechanisms for acupuncture, herbs, and dietary benefits. Physical and pharmacological therapies are integrated into the body-mind network in Chinese medicine’s health concept. The complete model must be tested in clinical practice, and this requires whole-systems research to assess its efficacy. Clinical study design and patient safety may both benefit from scientific research since it gives a mechanistic knowledge of the processes involved. Preliminary data suggests that incorporating TCM into Western cancer therapy may be beneficial [3].

2. Difference between Biomedicine and TCM

Because a single trial evaluating an intervention for a particular disease entity is negative, TCM should not be disregarded as a whole. Western biological medicine follows the same logic, of course. The whole field of biomedicine is not wiped clean by a single failed drug research. Disparities between Eastern and Western medical definitions of illness, as well as a focus on various treatments, individualization, and flexibility in therapy, further complicate the problem. TCM has the issue of creating standardized and reliable results. Herb and acupuncture science is fast becoming established, yet well-designed, pragmatic and controlled clinical trials are missing in most areas of research [4].

It is possible that TCM might be used in conjunction with WM to better serve the needs of the patient population. TCM philosophy presents new ideas that will aid in the development of science-based holistic medicine. The term “biomodulation” refers to the modification of an organism’s biochemical or cellular condition in response to external stimuli. In most modulation events, the capacity of an enzyme to perform a certain reaction is altered by a molecule (the modulating agent). Biomodulation, including immunotherapy, is used in cancer treatment to boost the body’s anti-tumor response.

It involves regulating inherent molecular, chemical and electrophysiological pathways using low-intensity chemical and physical stimuli. Alternative treatments, such as herbal remedies or their extracts, use a combination of chemicals at low dosages over an extended time period, as opposed to mainstream biomedicine (drugs, for example). In the soft tissue fascia, acupuncture causes low-level electrochemical alterations. Individual imbalances are targeted in TCM utilizing a diagnostic philosophy that is based on the accumulation of therapeutic experience. Chinese herbs and pharmacological treatments are contentious in WM due to a lack of information on whether the drug is beneficially increased or whether it has negative side effects. Preclinical studies have shown promising synergy between some of the combinations, thus future clinical research will need to take these findings into account [5].

3. Analysis

3.1 The Systemic Nature of Cancer

As a somatic disease, cancer is usually understood in WM to be the result of overgrown cell clones that have escaped environmental limitations and regulatory systems. Abnormal and foreign-looking cells have been found in this patient's bloodstream. A key tenet of cancer therapy is to eliminate the cancer cells directly, which is accomplished by the use of aggressive and destructive therapeutic methods. Body-mind connection is emphasized in TCM. Psychoneuroimmunology has shown a possible physiologic foundation for cancer cell growth by establishing the impact of emotional on cellular immunity or other processes. In TCM, cancer is seen as a symptom of an imbalance in the whole body-mind network. To put it more simply, cancer is a systemic illness that affects the whole body, not just the tumor itself [6].

For those who practice TCM, they think that through strengthening and restoring the body–mind network, the cancer may be resolved. This idea is currently being added to a science that looks at the whole picture as important as each part. In terms of its basic elements, interconnecting components, signal processing, and emission, we have been able to forecast an electronic integrated circuit’s behavior for decades. It will be able to build out the whole “integrated” circuit after we have mapped out all of the cellular signaling pathways. After that, we will be able to use mathematical modeling techniques to understand cancer cells. Cancer diagnosis and therapy will become a logical science if the process is fully understood. Proangiogenic peptides may be produced by bone marrow stem cells, according to recent studies. So Western science is currently investigating whether hematologic and solid malignancies are occasionally systemic diseases [7].
3.2 The Interaction between the Physical and Mental Selves

It is widely accepted in TCM that the human body and mind are linked. A “process” of body-mind connection rather than a “snapshot” of structural material things such as molecules is the focus of TCM philosophical analysis in its treatment methods. Considering that “software and hardware” may change each other, TCM might be seen as a computer’s software. There is a correlation between patterns of information, which are not reliant on the carrier, which is recognized by TCM theory as well. It doesn’t matter if information is sent by hormone and neuropeptide pulses or an electrophysiological frequency pattern; the pattern may be comparable [8].

Electrophysiological communication between the fascia and peripheral nerves is also facilitated by acupuncture stimulation of certain spots on a person’s body. Nervous system neuropeptides are released when the electrophysiological waves propagate through the brain. Communication is a multifaceted and time-dependent phenomenon. While the short-term results may be similar to those of acupuncture treatment, the long-term results may be substantially different [9].

The autonomic nervous system’s parasympathetic and sympathetic components may play a role in regulating the body-mind information system. An information pattern, rather than physical objects, is represented by the yin-yang balance in TCM. As proved inferentially by the use of proper computer software to generate spectrum analyses of electrocardiograms, an examination of the pulse using the traditional Chinese method may suggest a relative imbalance. The parasympathetic and sympathetic nerve systems may be rebalanced by acupuncture, according to research. Patterns of information transmission may interact to entrain and strengthen information flow in a dynamically complicated system. It is a self-replicating system. As a result, the body is capable of re-creating itself and adapting to changing conditions [10].

System-to-system communication may occur in a variety of complicated, nonlinear, hierarchical and nonlinear ways when a person is healthy. Energy in motion, or “e-motion”, is used as a metaphor for mind-body connection in this context. Over-plastic systems that lose process structure and permanently become chaotic in connection with local electrophysiological alterations may be connected with cancer and information flow disruptions [11]. Chronic restraint stress enhances lymphocyte apoptosis by modulating fas (also known as CD95) gene expression through a mechanism including opioid receptors, according to studies on rats. In other words, stress may affect the nervous system’s function and structure, potentially affecting lymphocyte gene expression, immunity, and cancer resistance. As an example, acupuncture may be used to rebalance the autonomic nervous system’s parasympathetic and sympathetic components to correct the overall imbalance in information flow. Conscious and unconscious stress systems interact in a similar way, which makes it easier to see how healing practitioners may entrain and normalize an unbalanced system to restore health.

Although these communication routes may be restricted in advanced cancer patients, relaxing the stress system may reduce cancer growth and recurrence by lowering the amount of immunocytes that defend cancer cells. It is necessary to go beyond the present pharmacological paradigm in order to understand these processes. Psychoneuroimmunology is a difficult field that necessitates an interdisciplinary approach that takes into account all of the many systems at play. To understand the simultaneous, synergistic effects of the various systems on body-mind outcomes, it will be important to develop computer models of dynamic systems and networks that are based on algorithms.

Body-mind network models are useful because they allow for the diagnosis and treatment of both physical and psychological disorders in a single framework. His diagnostic concept is illustrated in TCM terms by patterns of discord in the major organ systems and by anomalies of moisture, qi (energy flow), heat, essence and blood. For those with a Type C personality, the TCM model’s link between cancer propensity and increasing qi or “liver fire” may be a clue.

3.3 Acupuncture’s Biochemical Effects

There are several signaling routes in the body-mind network, and acupuncture may affect communication across these pathways simultaneously. Electrophysiological alterations in the nerve system are thought to be the most common mechanism by which acupuncture alters the activity of various brain chemicals and hormones. The limbic system, brain stem, autonomic nervous system and hypothalamus all interact with the activities of afferent peripheral nerves. It’s also been suggested that acupuncture may affect the body’s electromagnetic field, although the science behind this claim is still up for debate [12].

According to recent studies, the acupuncture needle is first transmitted via myofascial tissues. The interstitial connective tissue network may be compared to the acupuncture point and meridians network. Serial gross anatomici-
cal slices of the human arm were used by Langevin and Yandow to map acupuncture points. In postmortem tissue slices, they discovered a correlation of eighty percent between the locations of acupuncture points and intramuscular or intermuscular connective tissue planes. Special DNA staining shows that the surface sites are connected to a network of vessels that covers the inside organs. There may be a mechanical linkage between the needle and connective tissue, which results in tissue coil around it as it rotates. By mechano-transduction, a mechanical signal may be sent through needle manipulation. It is possible that a change in electrical impedance, which propagates across connective tissue planes and interact with cellular genome expression, might turn this signal into such an electrophysiological response that can trigger neurologic transmission.

In order to account for the placebo effect, randomized controlled studies of acupuncture must include a sham treatment group. Only a few studies have shown the efficacy of phony needles. Subjects who have had previous acupuncture experience may have an impact on the outcome of this study. During use, these devices pull a blunt needle down into the sheath. This is a fake method, but it is more effective than making small holes in the skin or picking points at random that are not on known meridians [13].

Streitberger’s sham needle was found to be indistinguishable from the real one in terms of actual penetration, but over 40% of patients were able to tell the difference between the two. This instrument’s potential use as a standardized acupuncture placebo may be jeopardized if over 40% of individuals saw significant differences between the two treatments. Before the Streitberger needle may be used with confidence in future investigations, the study’s authors conclude, further work on inter-tester reliability and procedure standardization is strongly suggested [14].

3.4 The pharmacology of Chinese medicinal herbs

In TCM, herbs are combined in order to maximize their benefits while minimizing their adverse effects. As a result, a combination of low-dose pharmacological substances is being supplied simultaneously. Chemotherapy medications are often combined in order to reduce the risk of drug resistance, which is common in WM. A possible side effect of this combination is an increase in medication toxicity. TCM practitioners claim that herbal combinations help lessen the side effects of anticancer medications, but further study is needed to identify their pharmacokinetic interactions and possible deleterious consequences [15].

Scientifically incorporating Chinese herbs into Western medicine requires a preclinical assessment, systematic methodology to phytochemical profile, quality control and safety evaluation, as well as phase I-III clinical studies. More research is needed to determine the best herb combinations for creating synergistic effects. When it comes to TCM, herbs have always been used together in a variety of ways.

![Figure 1. A methodical scientific approach to integrating Chinese medicinal herbs into Western therapeutic practice.](image.png)
Initial clinical studies indicate a decrease in gastrointestinal toxicity and an increase in the chemotherapy’s tumoricidal impact. Some Chinese herb combinations have been shown to synergistically interact with cytotoxic chemotherapy in preclinical investigations. Phellinus linteus, for instance, is mostly composed of polysaccharides. Doxorubicin-induced apoptosis was enhanced in a prostate tumor cell lines cultured in vitro [16]. No apoptosis was seen in the cells when P. linteus was used in combination with doxorubicin at low dosages. However, a synergistic effect was shown when modest dosages of both drugs were combined to induce apoptosis. Caspases in lnap prostate cancer cells are activated when doxorubicin and P. linteus are combined. At subtoxic quantities of doxorubicin, one may get sensitization. P. linteus may lower normal tissue toxicity while increasing therapeutic gain when used in conjunction with standard chemotherapeutics like doxorubicin.

Current technology demonstrates the multifaceted anticancer properties of Chinese herbs. Many are powerful antioxidants capable of inducing apoptosis, while others are antiangiogenic agents. Traditional cancer-fighting herbs may play a vital role in anti-cancer therapy via synergistic efficacy with cytotoxic drugs and maintenance regimes for preventing recurrence. Future research need to emphasize the use of technology to confirm scientific methods for quality assurance, clinical efficacy, optimization and safety within the context of contemporary cancer therapy. A recent article of the Consolidated Criteria of Reports Trials group, which develops the guidelines for clinical trials of health products, asserts that strict adherence to the establishment of research procedures and reporting standards is required. A better working partnership between national governments, industry, and universities is required to further develop Chinese herbal medicine for use in Western cancer clinics.

3.5 Perspectives on the use of WM therapy

3.5.1 Treatment

Individuals’ physical and psychological health, as well as their treatment regimens, was thought to be key determinants in determining the WM’s curative impact on cancer patients. WM’s therapeutic impact isn’t entirely apparent. In one instance, the patient opted out of taking any medication at all. It has spread as a consequence. The cancer hasn’t spread among those of us on medication.

3.5.2 Consequences of treatment

Common adverse effects of these procedures include discomfort at and difficulties after the operation. Chemotherapy has a greater impact on patients’ looks, health, and mental well-being than other treatments. Patients who are forced to postpone treatment due to chemotherapy’s adverse effects are often in excruciating agony, according to several participants in the study. Chemotherapy side effects were severe, including hair loss, darkening of blood vessels, nausea, and an inability to consume solids. Patients with breast or ovarian cancer who had WM therapy report that the treatment caused them to lose their femininity, resulting in a feeling of humiliation and self-abasement in their everyday lives and marriages [17].

3.6 TCM therapy and rehabilitation perspectives

During the recovery phase, Chinese medicine was the primary treatment option. TCM was the primary supplemental treatment of choice for patients throughout the recovery phase, according to several researches, and this practice remained for an extended period of time. Long-term usage of TCM has been shown to help patients restore their immune systems, which have been damaged by cancer treatments. Some of the participants in the trial were certain that the TCM would have no effect in the near term and questioned if they were receiving anything more than a placebo. However, they were driven to seek out alternative treatments by their own dread of dying. The majority of participants also believed that TCM was a safe and non-invasive therapeutic strategy.

3.7 Discussion

TCM was utilized mostly throughout the healing process. Patients’ commitment to therapy and their doctor-patient relationship seem to be harmed by a lack of open communication between physicians and cancer patients. Diagnostic tests and therapy were costly, while the cumulative expenses of regular TCM usage in long-term rehabilitation were similarly significant. Both of these therapy methods were quite expensive for the persons who received them. Cancer survivors were often perplexed by the conflicting advice they received on nutritional supplements [18].

The adherence and treatment choices of cancer survivors are dependent on their understanding of cancer therapy. To go back to a stable bodily and psychological condition, patients must overcome the WM therapeutic procedures including as surgery, radiation, and chemotherapy. The dread of treatment side effects was cited by many cancer
survivors as a primary reason for discontinuing treatment in part or in its whole. The recognized scientific theories are used to diagnose and treat the WM. Patients place a higher value on a certain diagnostic and treatment outcome than they do on the restoration of the body’s stable state. As a result, patients in the early stages of cancer therapy preferred the WM treatment. Participants in this research tended to choose TCM as a treatment of last resort during the rehabilitation phase, particularly those who had had chemotherapy and found it unsuccessful or had to discontinue it due to severe adverse effects [19].

Studies have shown that TCM does not significantly reduce the negative effects of WM, however. In contrast to other research, this one found that participants expected TCM to take a lengthy period before showing results. Patients’ increased involvement in the decision-making process and lack of awareness regarding curative effects add to the burden of cancer patients when it comes to determining treatment choices. More clinical study is needed to validate the long-term benefits of TCM, as well as its toxicity and adverse effects. TCM teaching for cancer patients might be based on this research. Patients may not be able to distinguish between different cancer rehabilitation dietary supplements because of the abundance of confusing information on the market. It is critical to improve marketing and consumption management to better educate patients. A growing number of nations, particularly in East Asia, are using TCM as a complementary and alternative medicine (CAM). Patients, doctors, and the medical system were all engaged in a biopsychosocial interaction when they used TCM, as has been shown for other CAMs. TCM was mostly utilized throughout the cancer healing period and neither TCM nor WM are inexpensive. In earlier research, the use of complementary and alternative medicine by cancer patients at various stages of therapy and recovery was often disregarded [20].

Doctors must be prepared to deal with the side effects of cancer therapy for their patients. Prior to therapy, patients are more anxious than at any other point in the process. Patients’ capacity to express their concerns to doctors may be hampered if doctors use their position of power to bully them into silence. A patient’s adherence to a treatment plan may decline if physicians only focus on the ailment and not on the patient’s well-being. Enhancing the flow of information between oncologists and cancer patients is essential while treatment plans are being developed and put into action. Oncologists have a legal obligation to tell cancer patients about their treatment choices, the benefits and drawbacks of those alternatives, and to let them make an informed treatment decision based on their own specific circumstances. In addition, a therapy and rehabilitation strategy focusing on the needs of the patient should be prioritized. In order to level the playing field between patients and physicians, medical professionals must get training in improving their communication abilities. Cancer patients’ needs for health information and complete health care services are also anticipated to be met by these organizations.

Cancer is a chronic illness, and one of the most effective ways to control it is via patient self-management. Only by consistently enhancing patients’ treatment and rehabilitation knowledge can they deal with challenges that arise in long-term therapy and rehabilitation. Patients should approach their health issues with a can-do mentality. It is important for them to be involved in the planning process and show their own personal initiative. Patients, on the other hand, must prove that they respect and trust their physicians. Patients’ adherence to therapy is improved when physicians and patients are able to communicate effectively and deliver relevant information to each other. Cancer therapy and recovery should be managed scientifically.

The cost of cancer therapy has become a major barrier for most cancer patients seeking effective medicines. As a result, cancer patients’ compliance with treatment may be improved by greater insurance coverage for various treatment choices. Less costly foreign medication was first preferred over TCM by the study’s cancer survivors. The TCM methodology, on the other hand, was preferred by cancer survivors throughout their recuperation. When it comes to cancer treatment, cancer patients have a wide range of options when it comes to medication and long-term rehabilitation.

4. Conclusion

Physical and pharmacological therapies are integrated into the body-mind network in Chinese medicine’s health concept. This model does not have a Cartesian divide, but it is required to separate the components in order to enable scientific inquiry under the constraints of reductionism, positivism and controls for confounding influences. It is critical to conduct whole-systems research in order to assess the whole model’s performance in clinical practice. Individual processes and environmental elements are important to consider while doing clinical research. The effects of a system as a whole are not like those of a single medicine; rather, they include global modifications in many different parts of the person. Clinical research may be improved and made safer by better understanding the processes involved in scientific dissection, which is on the other end of the epistemological spectrum from intuition [21].
5. Summary

It is important to learn about cancer survivors’ experiences with the use of WM and TCM in the rehabilitation of cancer patients and survivors in order to increase their adherence to treatment regimens. As a result of better contact between physicians and cancer survivors, treatment outcomes are improved. If you are going to educate cancer survivors about both WM and TCM, you need a thorough and holistic approach. For cancer rehabilitation, nutritional supplement marketing management and customer advice are also essential. Therefore, the proportion of cancer survivors and patients who reported comparable concerns based on socioeconomic class, the kind of cancer, and its treatment should be investigated.

References


