Acupuncture: A Scientific Review and Clinical Applications

Presented January 8, 1998 by Matthew Lee, M.D., M.P.H., F.A.C.P.
Reviewed by Steven Syrop, D.D.S.

Dr. Matthew Lee presented an introduction to acupuncture and its role in the treatment of chronic pain. Dr. Lee is well qualified to speak about pain management. He is Professor of Clinical Rehabilitation Medicine at New York University School of Medicine. As a physician specializing in psychiatry with an interest in chronic pain, he is the medical director of the Rusk Institute of Rehabilitation Medicine, NYU Medical Center. He has authored numerous books and publications and serves on the editorial board of several journals.

Pain is a complex response to a noxious stimulus. Chronic pain becomes a disease which modifies a person's behavior, emotions and neurophysiology. According to Dr. Lee, each year patients spend forty billion dollars on efforts to reduce their pain. Of this, fourteen billion dollars are spent on alternative medicine. The field of alternative medicine is rapidly growing.

Dr. Lee explained that acupuncture has been available for thousands of years in China, but references to acupuncture in Western medicine date back to 1825. In 1972, when President Nixon established diplomatic contact with The People's Republic of China, the Chinese culture and medicine was available to the United States. Dr. Lee went to China the following year in 1973 and observed first hand the medical and research application of acupuncture.

There are two mechanisms to explain how acupuncture works. Endorphins. Endorphins are produced naturally in the body and, while being similar in structure to morphine, are many times more potent. They play an important role in controlling pain. Naloxone is an antagonist to morphine and endorphins. Naloxone neutralizes the effect of endorphins. Naloxone reversal effect is an accepted research method to establish that the endorphin system was active in pain control. Dr. Lee described experiments where pain reduction was attained with acupuncture. Injecting naloxone reverses the effect of acupuncture and provides evidence that acupuncture facilitates the release of endorphins.

The second mechanism to explain the effect of acupuncture is based on a peripheral effect on the sympathetic nervous system. It is suggested that acupuncture blocks sympathetic flow. This has been documented by the use of thermography which demonstrates temperature changes on the surface of the skin related to acupuncture. Dr. Lee hypothesized that presumably, acupuncture inhibits the sympathetic nervous system which, in turn, alters the peripheral circulation.

Although there is a body of research to support the use of acupuncture, it does not fully meet the rigorous requirements demanded by the medical establishment.

Much of the research is anecdotal or case histories. Reproducible, well controlled, double blind placebo studies are hard to find. This should be interpreted properly; just because something should be abandoned. Based on the existing data, it appears to be an emerging treatment modality which may prove to be very useful.

In 1994, The National Institutes of Health held a technology assessment workshop on alternative medicine focusing exclusively on acupuncture (1). Numerous experts presented data to both the NIH and the FDA. As a result of this meeting the FDA reclassified acupuncture needles for general use with limited risk (class III). Previously they were classified for investigational use (class III). Prior to 1972 the FDA did not even permit the import of acupuncture needles to the United States. The government has been responsive to the growing body of data to support acupuncture has reduced its estimate of the risk associated with it.

The application of acupuncture in medicine leads to a discussion of alternative medicine. When recommending that a patient receive acupuncture it raises the question "How do health professionals deal with the issues surrounding alternative medicine?" Is it appropriate recommend treatment that is not part of mainstream medicine in industry?

Alternative medicine is one of several umbrella terms that cover a broad range of treatments which usually include acupuncture.
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Many alternative therapies exist in dentistry. While all major health organizations recognize the safety of silver amalgam restorations there is still a group of dentists blaming a variety of diseases on mercury leaking from fillings. They recommend removal of amalgam fillings to treat such diseases as multiple sclerosis and chronic fatigue syndrome. "Holistic Dentistry" (the term is loosely defined) promotes fasting, nutritional counseling, selling vitamin and food supplements to patients (3). The treatment of temporomandibular disorders is a haven for many unproved therapies including kinesiology, and numerous electronic pain reduction devices.

I am not comfortable with the term alternative medicine. Alternative means another usable method of achieving an acceptable result (5). Alternative implies that there are choices of equal effectiveness and equal risks. It implies that one choice is as good as the others. Many times practitioners and patients abandon traditional medicine and replace it with an alternative therapy. An example would be that of a cancer patient avoiding chemotherapy and in its place substituting lacteal or mega-vitamins.

Many people now suggest the use of the term complementary care as opposed to alternative medicine. Complementary is defined as supplementing and being supplemented in return. It implies a continuation of traditional medicine while supplementing the treatment with non-traditional therapies. It does not force the patient to choose between alternatives. Complementary care does not abandon conventional medicine it works with it. It is my preference to use the concept of complementary care in place of alternative medicine.

Although Dr. Lee did not use the term complementary care he employed the concept. He suggested that patients in pain continue with their doctor's care and when appropriate to use acupuncture to supplement their pain management. After several acupuncture visits they can judge for themselves if there is enough benefit to justify continuation. If acupuncture is discontinued then no harm has been done; if successful then the patient received enormous benefit. Dr. Lee suggested a very practical way to view the role of acupuncture.

Earlier I asked the question: "Is it appropriate to recommend treatment that is not yet part of mainstream medicine or dentistry?" It is my opinion that there is a rational way for clinicians to address complementary care. The clinician cannot wait years for the definitive research to be completed to determine the efficacy of a particular treatment. There is pressure by patients to try alternative medicine as measured by the billions of dollars spent. A responsible approach needs to be developed. In the absence of medical proof answering the following questions can help the clinician in making recommendations.

1. Is the modality reversible? Will it lead to any irreversible treatment? In general this question asks will the patient risk any permanent harm?

2. Will the use of the modality prevent or discourage the patient from receiving a proper diagnosis? Is there a chance that a serious condition will go undiagnosed as a result of reliance on an alternative therapy?

3. Is the treatment used in place of, or in combination with, a traditional accepted treatment? Is it alternative medicine or complementary care?

4. Is the treatment contrary to scientific principles and common sense? Or does it follow scientific principles and it is just not yet...
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- Article X: Section 3 was amended to allow the Board of Directors to make disbursements from the Advancement Fund without a vote of the Fellowship.

Original text:

No appropriations or disbursements from this fund shall be made for any purpose whatsoever without the approval of the Board of Directors and four-fifths of the Voting Fellows present at any regular meeting or a special meeting called for the purpose.

Recommended change:

No appropriations or disbursements from this fund shall be made for any purpose whatsoever without the approval of the Board of Directors.

- Article XII: Section 5: Paragraph two was amended to allow the Treasurer to suggest the transfer of monies from the General Fund to the Advancement Fund at any time rather than at the end of each fiscal year.

Original text:

At the end of each fiscal year the Treasurer shall suggest to the Board of Directors whether monies might prudently be transferred from the General Fund to the Advancement Fund and, if directed, shall do so. The interest accruing in the Advancement Fund shall be added to the principal thereof.

Recommended change:

The Treasurer shall suggest to the Board of Directors whether monies might prudently be transferred from the General Fund to the Advancement Fund and, if directed, shall do so. The interest accruing in the Advancement Fund shall be added to the principal thereof.

- Article XVIII was amended to create an Annals of Dentistry Committee by adding it to the list of standing committees.

Recommended addition: Article XVIII: Section 10: Standing Committees

Annals of Dentistry: To consist of three (3) members appointed under the rules governing Standing Committees, a member of the House and Archives Committee employed for not more than one year.

Chairperson. This Committee shall assist and advise the Editor in all matters concerning the journal.

- Article XIX: Section 1 was amended to provide for the publication of the "Annals Of Dentistry" at least once each year.

Original text:

The Academy, together with such other Dental organizations as shall become associated with the project, shall publish and finance a Journal to be known as the Annals of Dentistry. The Journal shall be under the direction and supervision of the Editor who is elected by the Academy.

Recommended change:

The Academy, together with such other Dental organizations as shall become associated with the project, shall publish and finance a Journal to be known as the Annals of Dentistry. The Journal shall be under the direction and supervision of the Editor who is elected by the Academy. The Annals shall be published at least once a year.

In addition, a paragraph was added to the Administrative Policies section of the Academy's Policy Statement providing for all committees to submit a budget to the Finance Committee Chairperson prior to the November meeting. The added paragraph reads as follows:

All committees should present a budget, if monies are needed, at the Budget and Finance Committee Chairperson in writing prior to the October meeting. The Budget and Finance Committee must convene sometime after the October meeting to vote on all budgets and formulate a current year budget. These budgets should be submitted to the Board of Directors at the November meeting for approval.

The protocol of all committees was similarly altered with the following addition to each protocol:

All committees should present a budget, if monies are needed, to the Budget and Finance Committee Chairperson in writing prior to the October meeting.

Following approval by the Board of Directors, copies of the amendments to the Constitution and Bylaws were printed and circulated with the meeting notice prior to the March 1998 meeting for a vote by the assembled fellows at said meeting. However, at the March 12th Board of Directors Meeting, the Board voted to rescind the changes to Article III.

Respectfully submit:
Jonathan Rabino
Juliette Sena
George Stina, Jr., Chair

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proved to the level necessary to be fully accepted.

Answering questions similar to these will help clinicians to arrive at what is right for their patients.

New and unique treatments all must run the same gauntlet of scientific criticism. Those that survive will eventually become accepted as standard of care. Those that cannot survive must be abandoned. I suggest that we keep an open mind to new therapeutic approaches during the scientific testing period.

References

