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February 28 and March 1, 1973

Bethesda, Maryland

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SUMMARY STATEMENT

on

NIGMS ACUPUNCTURE RESEARCH CONFERENCE

February 28 - March 1, 1973

On Wednesday and Thursday, February 28 and March 1, the first national acupuncture research conference was held in Bethesda, Maryland. The conference, sponsored by the National Institute of General Medical Sciences, brought together about a hundred American scientists and physicians to report studies already under way or about to be started.

On the basis of the results presented at the conference, the ad hoc Committee on Acupuncture of the National Institutes of Health, concluded that acupuncture holds some promise as an anesthetic for certain surgical operations and for the treatment of some acute and chronic painful conditions. From these preliminary studies, however, it is not possible to specify how acupuncture works or even to say how well it compares with drug-induced anesthesia or with well-established methods of treating painful conditions.

Moreover, it is clear that acupuncture is no panacea--that many more well-designed and well-controlled scientific studies are needed before it could be considered for wide use in clinical practice in the United States.

One of the serious problems in evaluating acupuncture for relief of pain is that pain itself is a complex phenomenon which also should receive greater scientific research efforts. Since it is now well established that environmental, genetic, cultural, ethnic, and other factors influence pain and a patient's response to drugs, it is essential to assess the effects of acupuncture and its efficacy in American patients. When these data are available it will be possible to compare our results with those already published in the People's Republic of China. In this regard it would be of great value to develop an exchange program of American and Chinese scientists and physicians, and also to provide for the exchange of information.

By: Dr. John J. Bonica
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INTRODUCTION TO NIH ACUPUNCTURE RESEARCH CONFERENCE

John J. Bonica

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On behalf of the National Institutes of Health and particularly Dr. DeWitt Stetten, Director of the National Institute of General Medical Sciences; Dr. Robert Marston, Acting Director of the National Institute of Neurological Diseases and Stroke; Dr. Seymour Kreshover, Director of the National Institute of Dental Research; and Dr. Milo Leavitt, Director of the Fogarty International Center; I welcome you to this acupuncture research conference. The purpose of the conference is to bring together some of the scientists and physicians currently doing research on acupuncture to present a brief summary of their investigations and preliminary results and to consider the guidelines developed by the Ad Hoc Committee on Acupuncture at its first meeting last July.

The appointment of the committee by Dr. Robert Marston, then Director of NIH, was prompted by developments during the past two years and the consequent great surge of interest in acupuncture. Although acupuncture is said to be 5,000 years old and has been practiced not only by the Chinese but by physicians in Japan and other oriental countries for 1,500 years and by French and European physicians for four decades, up to two years ago acupuncture received little or no attention by the American biomedical community. Moreover, while acupuncture has been used extensively by non-physician acupuncturists in the oriental sections of New York, San Francisco, Seattle and other major cities, the procedure was unknown by the American people. The initial reports by Edgar Snow in the May 1, 1971, issue of New Republic and that of James Reston in the August 22, 1971, New York Times began to arouse the interest of the American public. The visits by Drs. Paul Dudley White, Grey Dimond, Samuel Rosen, and Victor Sidel to the People's Republic of China in 1971, and their subsequent reports of acupuncture anesthesia in the lay press and in medical journals increased the interest of both the public and the medical profession. The report of Drs. Ethan Signer and Arthur Galston in Science brought this procedure to the attention of the biomedical scientific community. President Nixon's 1972 visit to China aroused Americans' curiosity about things Chinese, including acupuncture. The subsequent report by Dr. Walter Tkach, physician to President Nixon, particularly about his observation of acupuncture anesthesia for surgical operation, further increased people's interest. The almost incredibly high degree of interest is indicated in part by the fact that during the past six months more articles have appeared in the news media on acupuncture than all other medical topics combined.

The National Institutes of Health started to look at acupuncture about three years ago when the Fogarty International Center, that part of the NIH which is involved in international scientific programs, began to study

various aspects of Chinese medicine. The Center accumulated a great deal of literature from various parts of the world and last year published it in a monograph of which one chapter was devoted to acupuncture. Subsequently, Dr. Robert Marston, then Director of the NIH, considered the possible role this agency might play in encouraging serious scientific study of acupuncture. In June 1972, he appointed an Ad Hoc Committee on Acupuncture to advise him about this matter and assigned responsibility to NIGMS, NINDS, and NIDR as the three institutes that might be primarily involved with research support on acupuncture. The committee consisted of Drs. Morris Bender, Henrik Bendixen, James Chen, Choh-luh Li, Wilbert Fordyce, Frederick Kao, Ronald Katz, Ronald Melzack, and Patrick Wall, with me as Chairman. The committee met on July 17 and 18, 1972, and after reviewing and seriously considering all of the evidence, they concluded that acupuncture is indeed a subject that deserves serious scientific study by the American biomedical community. The committee made four recommendations: (a) to review the literature including translation of articles from Chinese to English by Drs. Li, Kao, and Chen; (b) to conduct a survey of medical centers in the United States, Canada, Europe, Japan, and other Asiatic countries to find out what serious scientific study is being done on acupuncture; (c) after the survey is completed, an acupuncture research conference be held to bring together the American scientists and physicians doing research on acupuncture; and (d) that a visit to China be undertaken by a small group of biomedical scientists and physicians to see the clinical application and research being done on acupuncture.

The survey of the literature is being carried out and at present articles are available including a large number translated from the Chinese. The survey of the United States revealed that some form of research is being done in about 26 American medical centers. The registrants to this conference constitute a major portion of Americans doing research. And now for the preliminary results.

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PRELIMINARY FINDINGS WITH ACUPUNCTURE TREATMENT OF PAIN

R. J. Beebe, T. W. Andersen, and H. M. Perkins
Veterans Administration Hospital
and

University of Florida College of Medicine, Gainesville, Fla.

This is a preliminary report of our findings in a study designed to attempt to evaluate to what degree, if any, suggestion plays a role in the therapeutic effect of acupuncture in the treatment of chronic pain.

Eighteen male veterans suffering from different types of chronic pain were treated by a resident physician who had no special knowledge of, nor experience with, acupuncture.

Diagnosis

Post Laminectomy	6
Low Back Pain	2
Causalgia	5
Osteoarthritis	1
Phantom Limb	2
Herpes Zoster	1
Anesthesia Dolorosa	1

Four 27 g. disposable needles were inserted randomly subcutaneously and left in place for 30 minutes. During this period the physician stayed with the patient and occasionally twirled the needles while he talked with the patient about his illness.

Approximately 60 percent of our patients experienced at least 50 percent relief of their pain.

Degree of Pain Relief in Percent Immediately Following Treatment in 18 Patients

0	50%	75%	100%
7	2	3	6

The relief was transient and varied considerably in duration.

Duration of Pain Relief in 18 Patients

None	Hours	Days	Weeks
7	11	4	3

Obviously, we are not drawing any conclusions from this very small number of observations. We are surprised, however, that this procedure was twice as effective as other placebo treatments. This may be more than a chance observation. The patients' expectations were high due to the wide-spread publicity. The individual attention of a physician, combined with the positive act of inserting the needles, is likely to leave a greater impression on the patient than the administration of a tablet or an injection.

Discussion

Dr. John Bonica: What is the difference between the post-laminectomy pain group and the low back pain group in your first Table?

Dr. Andersen: Actually, all eight of these patients had low back pain. However, six had had laminectomies, and the other two had not.

Dr. Bonica: In other words, you were discussing low back pain in two sub-categories, laminectomy or no laminectomy. I am not quibbling, and only brought this up in order to make the point that if we start serious studies of pain, I hope we all use the same terminology for chronic syndromes.

Dr. Ronald Dubner: How many of us here are familiar with the acupuncture points that are utilized for any given area of pain? I, for one, would like to know this in order to think about possible mechanisms.

Dr. James Chen: There are several translated text books available which list the key points recommended for any particular area. However, it is not a simple cookbook. There may be two or three alternate groups of points used for any disease. If one set does not work well, you switch to another set, or select several from each.

Dr. David Bresler: To make matters even worse, there are eight or nine different traditional needling techniques. Supposedly, each may be used to produce different effects at the same point.

THERAPEUTIC EFFECTS OF ACUPUNCTURE ON CASES OF CHRONIC PAIN

James Y. P. Chen
California Medical Group, Los Angeles, Calif.

It has long been established in China and more recently in European countries that pain relief can be achieved with acupuncture when applied properly in a variety of clinical situations. Our study was initiated in Los Angeles to evaluate the efficacy of the ancient Chinese art of healing in relieving chronic pain. This report deals with our preliminary results obtained with modernized Chinese acupuncture techniques during the last six months in small series of selected cases of chronic pain which responded poorly to conventional drug therapy and physiotherapy. The patients were selected from those with chronic pain due to migraine headaches, cervical syndrome, osteoarthritis of the knee and peptic ulcer. Included in this study were only those cases (a) with established diagnosis based on the history of the symptoms, findings on examination and x-ray pictures; (b) with at least a one year history of chronic pain as well as with at least a one month history of more or less daily pain without periods of remission exceeding 2-3 days, prior to acupuncture treatments; (c) showing poor response to conventional drugs such as analgesics, muscle relaxants, tranquilizers or corticosteroids, etc.; (d) and receiving at least four acupuncture treatments at intervals of 3-4 days or 6-8 days.

The main acupuncture points or loci used in these series of cases are as follows:

Migraine headache (unilateral headache)--Tai-Yang (Cu-2), Feng-Chih (GB-20), Sze-Chu-Kung (TB-23), Wai-Kuan (TB-5), Ying-Tang (Cu-1), and Ho-Ku (LI-4).

Cervical syndrome--Tien-Chu (Bl-10), Chien-Ching (GB-21), Feng-Chih (GB-20), Lieh-Chueh (Lu-7), and Hou-Chi (SI-3).

Osteoarthritis of the knee--Tu-Pi (St-35), Chi-Yen (special point), Nei-Ting (St-44), and Yang-Ling-Chuan (GB-34).

Peptic ulcer (stomach aches)--Tsu-San-Li (St-36), Chung-Kuan (Co-12), Nei-Kuan (EH-6), Nei-Ting (St-44), Wei-Yu (Bl-21), and Pi-Yu (Bl-20).

In each treatment acupuncture needles were inserted at specific points or loci with or without the application of an Electronic Pulsating stimulator (type 626-1,717 or G6805 made in the People's Republic of China) for usually 15-30 minutes.

Our preliminary findings are analyzed and summarized in Table I. The

overall results, based on pain relief indicate that acupuncture is effective in at least 70% of the cases in this study.

Discussion

Dr. Wilbert Fordyce: Your results are rated as good, excellent, poor, etc. What method was used to establish these criteria?

Dr. Chen: Generally, the patients reported how they felt. I do not have objective measurements, only the following observations. Many used less or none of their regular drugs, others with joint swelling or who limped, improved enough to where they returned to work. Those with migraine had fewer attacks, some were headache-free for two weeks, whereas previously it was at most two days between attacks.

Meridian Keys

Cu = Curious or special loci; GB = Gallbladder; TB = Tripleburner; LI = Large intestine; Bl = Bladder (urinary); Lu = Lung; SI = Small intestine; St = Stomach; Co = Conception vessel; EH = Envelope of heart (Pericardium)

TABLE I

PRELIMINARY RESULTS WITH ACUPUNCTURE IN CASES OF CHRONIC PAIN

Type	No. of Cases	Sex		Age Years (mean)	Duration Years (mean)	Number of Treatments (mean)	Results* (Pain-relief)			
		M	F				Excellent	Good	Satisfactory	Poor
Migraine	14	5	9	17-69 (46)	2-35 (7)	4-11 (5)	2	7	3	2
Cervical Syndrome (neck pain and stiffness)	21	13	8	25-72 (43)	1-15 (3)	3-7 (4)	5	9	4	3
Osteoarthritis of the knee	17	6	11	37-68 (49)	3-18 (5)	4-6 (5)	5	7	3	2
Peptic Ulcer	10	5	5	22-56 (41)	2-13 (4)	3-5 (4)	3	4	2	1

* "Excellent" indicates no pain for at least two weeks and about 75-100% improvement over previously used therapy; "Good" indicates no pain for at least 5-7 days and about 50-75% improvement; "Satisfactory" indicates little or no pain for at least 2-3 days and about 25-50% improvement; "Poor" indicates no significant improvement.

THE EFFECTS OF ACUPUNCTURE IN RHEUMATOID ARTHRITIS

Ephraim P. Engleman

University of California School of Medicine, San Francisco, Calif.

This is a progress report of a pilot study of the effects of acupuncture in 20 adults with rheumatoid arthritis. Subjects are limited to those whose disease fulfills the criteria of the American Rheumatism Association for the diagnosis of "definite" or "classical" rheumatoid arthritis, is of more than two year's duration and has been clinically active for more than six months prior to study. The study consists of two successive periods of observation, each lasting five weeks, and each consisting of ten treatments with acupuncture. Ten patients are treated with "appropriate" acupuncture during the first five weeks and with "inappropriate" acupuncture during the second five weeks. The remaining ten patients are treated reversely; inappropriately for the first five weeks, and appropriately during the second five weeks. Appropriate treatment consists of the placement of acupuncture needles and the use of moxa as determined by the acupuncturist. Inappropriate treatment consists of the placement of acupuncture needles at points distant and/or unrelated to those used for appropriate therapy. The adjunctive use of moxa during these treatments is also inappropriate. The medical treatment given to these patients during the months prior to acupuncture is maintained throughout the study period.

Results of the study will be analyzed on the basis of the patient's subjective response and objective criteria. Physical signs of articular inflammation are monitored by an examiner at the beginning, five weeks and ten weeks after treatment has started without knowledge of the sequence of appropriate and inappropriate treatment. Additional serial observations include the duration of morning stiffness, grip strength, time needed to walk 50 feet, erythrocyte sedimentation rates, serologic titers of rheumatoid factor, x-ray of target joints, psychologic tests and blood tests for hepatitis Australian antigen.

Analysis of results is not yet available. However, the "blind" examiner is able to make certain ongoing observations.

Of seven patients whose trial with acupuncture is complete, one "felt better" during one five-week period of acupuncture while four noted sustained subjective improvement through both five week periods. Indeed, four patients wish to continue treatment with acupuncture. However, only one patient showed objective physical signs of improvement during a five week period of acupuncture; three patients showed no objective improvement while signs of progressive disease were observed in two. Psychologic, laboratory and radiologic data on these seven patients will not be available for analysis until completion of the study of all 20 patients.

Discussion

Mr. Mark Linzer: Is there any relationship between the location of the acupuncture points used and the sites of rheumatoid disease, and how long is each treatment?

Dr. Engleman: The "appropriate" points are in the general area of the target joints. Treatments ordinarily last from 10 to 20 minutes.

Dr. John Bonica: You noted objective improvement with acupuncture in one patient although not in six others. Is this comparable to the normal trend of the disease state when treated with standard procedures?

Dr. Engleman: These observations are not inconsistent with the natural course of the disease. As you know, rheumatoid arthritis is subject to spontaneous fluctuations.

Dr. Ronald Dubner: In thinking about these apparently contradictory results, showing subjective improvement in spite of essentially negative objective changes, I would separate the disease state, as measured by your objective signs, from the patient's pain state, which is not necessarily directly correlated.

Dr. Engleman: If the patient is improved, one reason is because he has less pain. If there is objective improvement, particularly with regard to specific target joints, we are essentially measuring the degree of inflammation. One could say we are measuring both pain and inflammation, as well as the course of the disease.

Dr. Teruo Matsumoto: Dr. Engleman, I can add another example of this apparent contradiction. In a series of about 100 patients with osteoarthritis, seen at our clinic, a fair number report diminished pain yet we find no evidence of any changes in their x-ray films.

A CRITICAL EVALUATION OF ACUPUNCTURE FOR THE RELIEF OF CHRONIC PAIN

Edith R. Kepes, Melanie Chen, and Max Schapira
Albert Einstein College of Medicine, Bronx, N. Y.

The first part of this presentation concerns the experience with 82 adult patients treated with acupuncture for chronic pain problems. The second part describes the research on acupuncture which is presently underway at Montefiore Hospital and Medical Center.

Eighty-two adult patients with pain problems, referred by their physicians after failure with accepted western therapeutic modalities, have been treated with acupuncture. After signing an informed consent, the acupuncture method used was the insertion and manipulation of the acupuncture needle into classical acupuncture points as suggested in the "Principles of Acupuncture" edited by the Department of Acupuncture, Chinese Traditional Medical College, and "Handbook of Acupuncture Therapy" edited by the Shanghai Acupuncture Research Institute." (Both books were translated by Dr. Melanie Chen.)

The results of the first and second visits were much better than the final results. Approximately 68% of the patients benefited initially but only 46% were considered improved on discharge.

Best results were obtained with pain syndromes which are either self-limiting, such as myofascial pain, or with those which have spontaneous remissions (e.g., radiculitis of the neck and lumbosacral area). With headache, post-herpetic neuralgia, trigeminal neuralgia, and phantom limb pain, there was either no or only transient pain relief.

In order to evaluate the importance of classical acupuncture points and the possible placebo effect of this form of therapy, the following study is now in progress:

Patients are assigned in a random fashion into one of four groups. In group 1, acupuncture needles are inserted into classical acupuncture points as described in the preliminary study. In group 2, the same points are used but stimulation is carried out with an electrostimulator for ten minutes. The electrostimulator was purchased by Dr. Victor Sidel on his recent visit to the People's Republic of China. The stimulator produces a two millisecond pulse of adjustable frequency and voltage. (Frequency 1.5-40 Hertz; positive square wave and negative overswing; maximum output 90 volts; power supply 6 volt dry cell batteries.)

In group 3, the needle is inserted into points unrelated to acupuncture points and away from meridians.