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IN THE SPOTLIGHT

Is Auricular Acupuncture Beneficial in the Inpatient Treatment of Substance-Abusing Patients?

A Pilot Study

GLEN COVE, NEW YORK

Abstract – *Patients with comorbid substance abuse problems who were admitted to a psychiatric unit of a general hospital over an 11-month period were offered treatment with auricular acupuncture. Subsequently and retrospectively, the medical records of these patients were examined to assess compliance, side effects, impact on course, and acceptance of discharge recommendations. Patient's continuation of treatment in destination programs was also followed. Seventy-seven patients were offered acupuncture: 30 patients refused or had four or fewer treatments (control group), and 47 had acupuncture five or more times (treatment group). The treatment group did significantly better than the control group as indicated by the following findings: compliance with psychiatric/substance abuse treatment on the unit was 75% in the treatment group vs. 20% in the control group, noncompliance or AMA discharge rate was 2% in the treatment group vs. 40% in the control group, acceptance of staff's discharge recommendations was 77% in the treatment group vs. 37% in the control group, and 58% of the treatment group patients remained in follow-up treatment for at least 4 months, vs. only 26% of the control group patients. Average inpatient length of stay was 22 days for the treatment group patients compared to 16 days for the control group patients. Side effects in the treated patients were negligible. Auricular acupuncture thus appears to be a safe and inexpensive treatment modality that is easily administered and produces significant results. Its wider application in substance abuse treatment appears warranted.*

Keywords – auricular acupuncture; substance abuse; treatment outcome; acupuncture side effects.

INTRODUCTION

THE USE of unconventional medicine in the United States is becoming more widespread (Eisenberg, Kessler, Foster, Norlock, Calkins, & Delbanco, 1993). Expenditures associated with the use of unconventional therapy in

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1990 amounted to approximately 13.7 billion dollars, three-quarters of which were paid out of pocket. However, among alternative treatment modalities, acupuncture, while widely used and accepted worldwide, is relatively unknown in the U.S. and little utilized by its medical community.

Acupuncture has been used in China and other countries in the Far East for more than 2 millennia. It is closely connected to, and understood to be a part of, Chinese philosophy; thus, it uses terminology that is alien to Western medicine. It has developed as a science based on empirical observation, and is functionally, rather than anatomically, oriented. The main goal of acupuncture is the restoration of a general balance of physical and spiritual wellness rather than the treatment of an isolated symptom, syndrome, or organ.

According to Chinese theory, the life energy, Chi, circulates through pathways that, in the West, are called "meridians" (Maciocia, 1989). Disease is considered to be caused by a blockage, stagnation, or deficiency of energy. By activating points that are located on meridians, obstructions to energy flow are presumably opened and energy can be liberated or, if needed, added. Several studies have shown that acupuncture promotes the production of alpha and beta endorphins, leu enkephalins, dynorphins, substance P, serotonin, epinephrine, and other chemically potent substances (Clement-Jones, McLaughlin, Lowry, Besser, Reese, & Wen, 1979; Smith, 1992). Perhaps because endogenous substances mediate acupuncture, it is rare to have an allergic reaction or other serious side effects from it.

Parenthetically, we might also note that malpractice suits are almost unheard of in the acupuncture community. Malpractice insurance is, thus, minimal, and the equipment used for acupuncture is very inexpensive, with the principal cost being that for the needles.

Despite its general underutilization in this country, studies over the past 15 years have begun to document the use of auricular acupuncture to treat substance-abusing patients and suggest that it is an effective, inexpensive, and safe procedure for alleviating craving and withdrawal symptoms during detoxification protocols (Brumbaugh, 1993; McLellan, Grossman, Balaine, & Haverkos, 1993; Wells, Jackson, Diaz, Stanton, Saxon, & Krupski, 1995). When combined with ongoing counseling and AA/NA participation, acupuncture also appears to be effective in preventing relapse. Along with specific treatment, education, and discharge planning, acupuncture can, thus, be one more activity that the staff provides as part of both acute and long-term comprehensive care for patients with alcohol and/or drug use dependency.

Acupuncture treatment for substance-abusing patients in the United States was developed by Dr. Michael Smith of Lincoln Hospital in the Bronx, NY. During empirical studies with heroin-dependent patients, he identified five ear points to which acupuncture could be applied effectively (Smith and Khan, 1988). The same treatment was given to all patients. This introduced a revolutionary simplification of a seemingly complicated treatment procedure. Usually, acupuncturists have to carefully examine each patient's pulse and tongue, as well as obtaining an extensive physical history. Smith's method did not require such a detailed evaluation. A large percentage of Smith's opioid-dependent patients responded favorably to the treatment. Later, the same acupuncture localization was applied in the treatment of alcohol- and cocaine-dependent patients and found to be equally effective. The simplicity of this treatment made training accessible to many professionals from the substance treatment field. While simplification of the procedure may have reduced a potentially greater effectiveness with full-body acupuncture, studies (discussed below) have indicated that auricular acupuncture is more effective than a placebo procedure and produces long-lasting results for substance-abusing patients.

CONTROLLED STUDIES

In a placebo controlled study by Bullock and colleagues (1989), 80 severe recidivist alcohol-dependent individuals achieved remarkable results with auricular acupuncture.

Alcohol-dependent patients received acupuncture at specific ear points (treatment group) or at nonspecific ear points (control group). Twenty-one of 40 patients in the treatment group completed their treatment program, compared to only 1 of 40 in the seven control groups. Significant treatment effects were still evident at the end of a 6-month follow-up period. Patients in the treatment group expressed less desire to use alcohol and had a 50% lower rehospitalization rate than patients in the control group.

In a study reported by Margolin and colleagues (1993), 32 cocaine-dependent, methadone-maintained outpatients received auricular acupuncture. Methadone-maintained patients tend to abuse multiple illicit drugs and, over the last several years, cocaine has been increasingly abused in this population. Few treatment modalities appear to be helpful, and the efficacy of any medication remains in question. In the Margolin study, 50% of the patients completed the 8-week course of auricular acupuncture, of whom 88% attained abstinence from cocaine. Treatment completers reported decreased depression, decreased craving for cocaine, and increased aversion to cocaine-related cues compared to noncompleters.

In the first controlled study of auricular acupuncture in heroin detoxification (Washburn et al., 1993), 100 heroin-addicted patients in a 21-day outpatient program were randomly assigned to standard auricular acupuncture or sham treatment to inactive points. Attrition was high for both groups, but patients assigned to the standard treatment attended the acupuncture clinic for more days and stayed in the treatment longer than those assigned to the sham treatment.

The first author of this paper (M.G.) became increas-

ingly interested in the use of auricular acupuncture as the chief psychiatrist of an outpatient substance-abuse treatment program. He received training and was certified by Dr. Michael Smith's Acupuncture training program at Lincoln Hospital, a course that is essentially open to any licensed professional engaged in the treatment of substance abuse. The training course includes a didactic portion describing general principles of acupuncture, ear anatomy, and needle management technique, and a practicum portion utilizing patient volunteers in the Lincoln Hospital treatment program. By the end of the course, each participant usually feels comfortable in administering acupuncture independently. This author (M.G.) and other hospital staff who have subsequently completed this training were complying with the statutory requirements of the New York State Office of Alcoholism and Substance Abuse Services which governs the use and administration of acupuncture in substance abuse programs.

The study presented here was a pilot project that was conducted with limited resources. It sought to investigate several questions: whether auricular acupuncture can be successfully integrated into the treatment of dually diagnosed patients on a psychiatric inpatient unit, which subgroups of patients appear to benefit most from this treatment, how acupuncture affects patient compliance with treatment and course after discharge, what clinical and administrative problems arise during acupuncture treatment, and how acupuncture is received by patients and staff.

METHODS

Following review and approval by the hospital's medical board, the pilot use of auricular acupuncture was initiated in February, 1993, on the 18-bed psychiatric inpatient service at North Shore University Hospital at Glen Cove. This unit includes a dedicated four bed program for dual-diagnosis patients.

Acupuncture was administered by MG with three trained nurses. Response was recorded on a specially developed form (available on request). Treatment was usually administered daily. Patients received treatment to five standard points (Figure 1) with sterile disposable needles. Treatment usually lasted 20 to 40 min. Patients would then withdraw needles and deposit them in a needle container under staff supervision.

At the end of the calendar year, a medical record review was conducted for all cases admitted to the dual diagnosis program in the course of the preceding 11-month period, during which time the auricular acupuncture program had been in effect. In addition, an attempt was made to contact every patient offered acupuncture to learn of his/her course after at least 4 months posthospital discharge.

From February 1, 1993 to December 31, 1993, there was 244 patients admitted to the psychiatric unit at North Shore University Hospital at Glen Cove. Auricular acupuncture was offered to the 77 patients suffering from a concurrent psychiatric disorder and chemical abuse or dependency problem. Of these 77, 15 refused and another 15 had four or fewer acupuncture treatments. In our retrospective study, we compared documented treatment responses and other variables in these 30 patients (the treatment refusal or control group) to those found in the 47 patients to whom the acupuncture treatment was administered five or more times.

RESULTS

The acupuncture was well accepted from the beginning of the treatment by the majority of patients. Among the

FIGURE 1. Auricular acupuncture point locations. ["Shen Men (Open Gate); Sympathesis; Kidney; Liver; Lungs"].

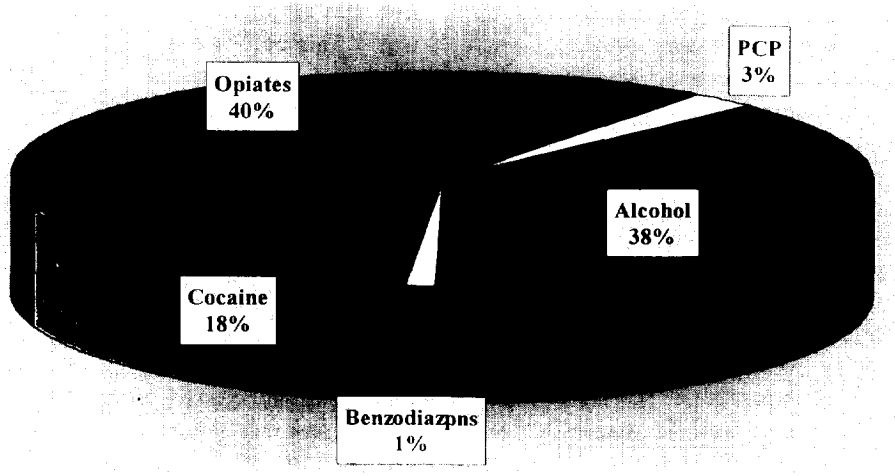

FIGURE 2. Distribution of patients offered acupuncture treatment (by primary drug of choice).

15 patients who refused it outright, the most frequently given reason was a fear of needles or a mistrust of new treatments. Among the 15 patients who received acupuncture four times or fewer, the most frequent reason for the refusal of additional treatment was disappointment over a lack of immediate improvement in the light of significant withdrawal symptoms. Arguments can be made that the treatment refusing and terminating groups had a poor outcome potential to begin with, but our observations are not sufficient to either confirm or refute this. On clinical grounds, they did not differ significantly from the treatment accepting group.

Figure 2 illustrates the distribution of primary drug abuse among the patients who were offered acupuncture treatment. It is evident that our sample included patients with different chemical dependency problems. However, the majority of patients was cross addicted to several drugs.

Demographically, there were no significant differences among the acupuncture compliant and the acupuncture refusing groups. However, as illustrated in Figure 3, receptiveness to acupuncture differed according to primary drug of choice.

Opioid-abusing patients have been historically the most difficult of addicted patients to treat. They tend to be disruptive, poorly compliant, and likely to end their treatment prematurely. These behaviors were far less frequently observed in the acupuncture treated group than in the control group. The patients indicated that they felt more relaxed, slept better, had fewer withdrawal symptoms, and were more amendable to other treatment modalities. The majority of the cocaine-dependent patients, on the other hand, had a difficult time relaxing during the treatment. They were less enthusiastic about treatment, refused it more often, and had a poorer response to acupuncture than other subgroups of addicted patients.

Patient treatment on the unit had multiple components: group and individual psychotherapy, cognitive therapy and psychoeducation, AA and NA meetings, medication, and milieu and other psychosocial treatments. The patient's compliance with all aspects of treatment was regularly monitored and discussed by the staff.

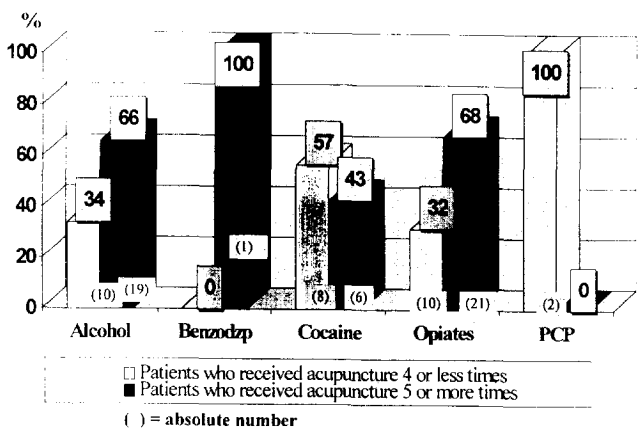

FIGURE 3. Patients' compliance with acupuncture treatment (grouped by primary drug of choice).

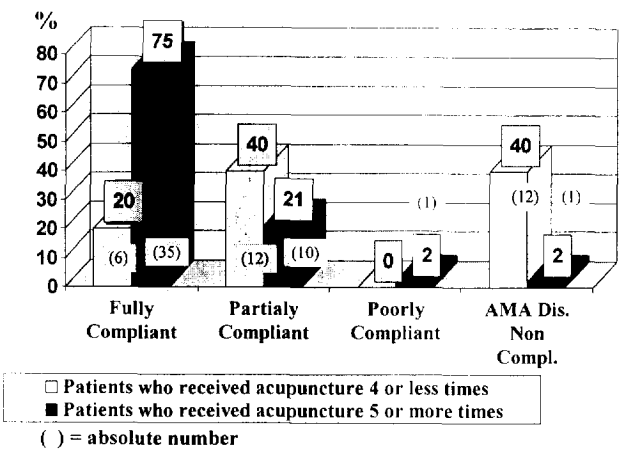

FIGURE 4. Patients' compliance with treatment on the unit (based on percentage of group membership).

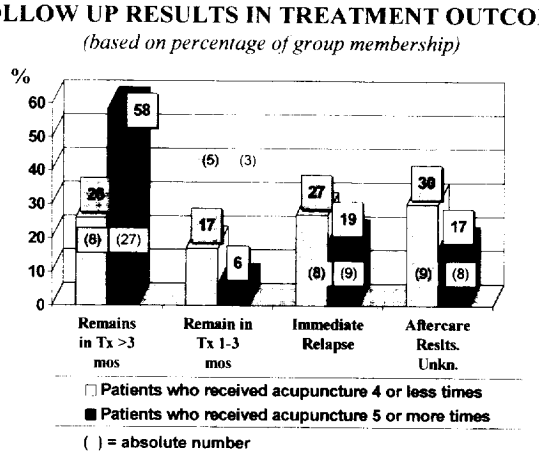

FIGURE 5. Follow up results in treatment outcome (based on percentage of group membership).

Subjective assessment by the staff of compliance by patients with the treatment program on the unit is reflected in Figure 4.

Seventy-five per cent of those who received five or more acupuncture treatments were assessed by the staff as being fully compliant vs. only 20% of those who received four or fewer treatments ($\chi^2 = 20.512$, $df = 1$, $p < .001$). On the other hand, 40% of the latter group were noncompliant or signed out against medical advice vs. only 2% of the treatment group ($\chi^2 = 9.308$, $df = 1$, $p < .01$). The expected length of the program was 3 weeks. The average length of stay among patients who accepted acupuncture was 22 days as opposed to 16 days for those who refused it. This was, thus, one more indicator of better compliance by the acupuncture patients.

Detoxification and rehabilitation are just the first steps in the usually life-long treatment required by patients who are clinically addicted. Therefore, discharge planning and placement in proper aftercare is of eminent importance. The staff of the unit spent a substantial amount of time discussing discharge plans with the patients. Patient's receptiveness to staff recommendations

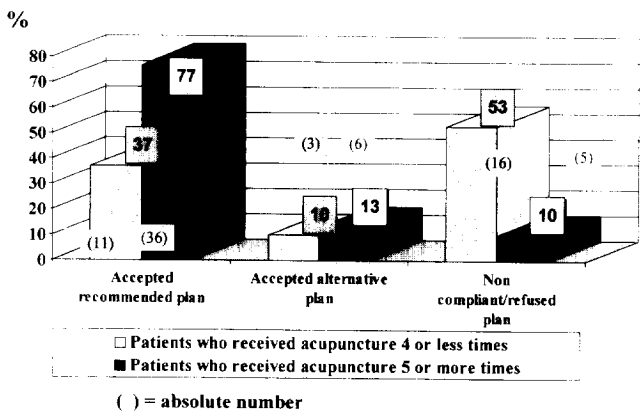

FIGURE 6. Follow up results in treatment outcome (based on percentage of group membership).

regarding discharge plans serves as a measure of their compliance with the treatment program and probably as an indicator of their future prognosis. As indicated in Figure 5, 77% of those who received acupuncture were fully compliant with discharge plans, in contrast to only 37% of those in the control group ($\chi^2 = 13.298$, $df = 1$, $p < .001$); 55% of the latter group refused or were noncompliant with discharge plans, while only 10% of the treatment group were in this category ($\chi^2 = 5.762$, $df = 1$, $p < .02$).

As seen in Figure 6, only 26% of the control group remained in outpatient follow-up treatment for more than 3 months vs. 58% of the treatment group ($\chi^2 = 10.314$, $df = 1$, $p < .01$). Immediate relapse was also more common in the control group than in the treatment group (27% vs. 19%), but this difference did not attain statistical significance.

The patients who received acupuncture usually reported feelings of relaxation and ease, a decrease in anxiety, and an improvement in mood, sleep, and appetite. Patients usually become more open and receptive to treatment. In many cases, their feelings of somatic tension and headaches fully disappeared. A significant number of patients actually requested acupuncture more than once per day during the initial stage of hospitalization.

SIDE EFFECTS

During the 11 months of experience with auricular acupuncture, there were no significant side effects reported by the patients. There were no incidents of infection or any long lasting complications. On occasion, several patients had minimal localized bleeding that did not require treatment. Several patients did complain of local pain and, as a result, either stopped the acupuncture temporarily or had less frequent treatments. There was no incidence of significant lightheadedness, blood pressure drop, cardiac or respiratory problems, or any other physical reactions. There was one early incident in which a nurse inadvertently stuck herself while removing a needle. Following review of this incident, the treatment protocol was modified so that patients removed the needles themselves under the observation of staff. Overall, auricular acupuncture proved to be an extremely safe procedure.

CASE VIGNETTE 1

T was a 44-year-old Irish male, a security analyst, and a self-made millionaire. While he had been drinking since the age of 18, his alcohol use had increased significantly over the last 10 years. He had had multiple blackouts, several car accidents, and two DWI arrests, and had been dismissed from his job 2 years earlier. After his wife left him, he began spending most of his time in a private club where he would drink all day. T was admitted to the hospital's intensive care unit in July, 1993 due to delirium tremens. Even after his transfer to the hospital's inpatient

psychiatric unit, he remained suspicious and paranoid. He claimed that "AA is just a bunch of phonies," and remained generally uncooperative with all unit staff and other inpatients.

After 2 weeks of hospitalization, he refused to accept any constructive aftercare plans and, just a few hours after discharge, immediately relapsed into drinking again. Three weeks later, T was readmitted due to impending DTs. After discussion with program staff, he reluctantly agreed to have auricular acupuncture. At the first treatment, he fell asleep 5 min after the needles were inserted, and later stated that he felt rejuvenated and refreshed. In the next 17 days, he took acupuncture as often as it was offered. His mood changed noticeably; he became cooperative and agreed to participate in all of the treatment and education programs offered on the unit. He attended AA meetings and secured an AA sponsor. He left the unit with prescribed antabuse and a commitment to continue his care in AA and a clinic. Contact with him over the next 4 months indicated that he continued to be alcohol free and to reliably attend AA meetings.

CASE VIGNETTE 2

A was a 32-year-old, Jewish, single unemployed male who, following 3 years on methadone maintenance, was attending the methadone detoxification program. He had been using marijuana, LSD, cocaine, heroin, and methadone since the age of 15. He had failed several prior detoxification attempts, and his life was in chaos. He had left college, was unable to hold a job, and had three arrests for substance possession. He finally decided to go off methadone, but became anxious and depressed, developing obsessive thoughts and cravings, and had difficulty staying substance free. He was admitted to the unit, where he was placed on methadone detoxification and accepted auricular acupuncture as often as it was offered. He reported feeling relaxed, refreshed, and motivated after each treatment. He became very active in all unit activities and attended all AA and NA meetings. Following his discharge, he continued his aftercare in our outpatient program, as well as maintaining active involvement in AA and NA. He resumed working, planned to return to college, and became a regular speaker for NA.

DISCUSSION

This was a clinical pilot study that was conducted with modest resources and aims. It did not address or control for multiple important patient variables, for example, severity of addiction, differences in socioeconomic status, comorbid Axis I and Axis II diagnoses, concurrent use of psychotropic medications, race, sex, marital status, education status, etc. Any of these variables could have influenced patient response to auricular acupuncture. Control and treatment groups were not compared regarding their differences and similarities in these variables, although primary drug of choice was examined. The determination of which patients received acupuncture treatment was based on voluntary choice, rather than on random assignment. Patient samples were relatively small, and statistical analyses were limited. Timing of the acupuncture during the day was often dependent on availability of trained staff. However, certain preliminary conclusions from this empirical pilot study seem warranted.

The use of auricular acupuncture to treat substance abusing patients is effective, inexpensive, and safe. It seems especially effective with patients who are poorly motivated and seem to present with a poor prognosis. Five-point auricular acupuncture is well suited for the treatment of patients with alcohol, benzodiazepine, and opioid dependence. However, 57% of patients with cocaine as their primary drug of abuse were not receptive or responsive to acupuncture. This agrees with the findings of Lipton and colleagues (1994). Acupuncture treatment alone did not totally control the acute symptoms of withdrawal from opioids or benzodiazepines, but appeared to significantly attenuate them. Acupuncture could be safely used with any of the medications that were administered to control withdrawal symptoms. Patients with alcohol problems appear to respond particularly well, as they required significantly less medication than alcoholic patients not receiving acupuncture.

Acupuncture helps patients decrease their drug craving, anxiety, and depression. It also may improve directly or indirectly, self-esteem, outlook on life, and compliance with inpatient treatment and discharge plans. It also may significantly improve patients' long-term prognosis and compliance with outpatient care. Given the above considerations, and assuming the presence of available state-approved training courses, we recommend that substance abuse programs consider including auricular acupuncture as one component of the treatment options that patients can be offered.

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