Bioresonance Therapy for Smoking Cessation

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ABSTRACT

Introduction: The World Health Organization reports that cigarette smoking is responsible for over 8 million deaths yearly. There is increasing evidence in the literature that alternative therapies such as bioresonance, acupuncture, and hypnosis are effective in smoking cessation. The aim of this study was to evaluate the effectiveness and results of bioresonance therapy for smoking cessation.

Methods: A total of 1272 patients who applied to Selçuk University Faculty of Medicine, Family Medicine Smoking Cessation Polyclinic for bioresonance treatment between October 2010 and September 2019 were included in this study. These patients were treated with bioresonance therapy for a total of 3 sessions per month to quit smoking.

Results: MORA bioresonance therapy (MORA BT) was the most preferred method of quitting smoking in the group that succeeded on the 3rd day, 7th day, 15th day, 1st month and 2nd months. However, there were no statistically significant differences between the successful and unsuccessful groups. No significant difference was found when MORA BT was compared with all other treatment methods (p=0.132).

Conclusion: This study presents the first protocol to compare bioresonance therapy with other smoking cessation treatments in a large sample group, based on fagerstrom nicotine addiction test scores in Turkey. Bioresonance therapy was found to be effective in smoking cessation, which increases the importance of the study and shows that bioresonance therapy is very effective in smoking cessation.

Keywords: Bioresonance therapy, smoking, smoking cessation

Introduction

Tobacco use, particularly smoking addiction, adversely affects public health and is the leading cause of preventable morbidity, mortality, and poor quality of life worldwide. The World Health Organization (WHO) reports that cigarette smoking is responsible for over 8 million deaths yearly (1). More than 7 millions of these deaths are directly related to the use of tobacco. Smoking continues to be a serious problem worldwide. smoking causes lung cancer, stroke, and heart disease (2). According to the WHO data, smoking restriction policies give good results in many countries. Also, most smokers who are aware of the dangers of tobacco want to quit. The demand for medical treatment methods used in smoking cessation has increased in recent years. Those who find these methods expensive, find the treatment process long, or fail to obtain results from medical treatment have turned to alternative treatments.

Quitting smoking at any time is primarily a beneficial step for a person's health and for public health. Recently, recommended intervention methods for quitting smoking include medication, nicotine replacement therapy (NRT), hypnosis, education, behavioral intervention, etc. (3). NRT was found to be superior to a placebo, increasing abstinence rate up to twofold, and the efficacy of bupropion and varenicline have also been proven through randomized trials (4,5). Although some side effects occur, such as nausea, insomnia, and headache, the consensus among experts is that NRT, bupropion, and varenicline are currently the first-line pharmacological therapies for smoking cessation today (6,7). According to the literature in recent years, complementary and alternative therapies in addition to medical treatments have become highly preferred for treating smoking cessation. The most popular methods are as follows; ear, transdermal and laser acupuncture, hypnosis, bioresonance therapy, electrostimulation, phytotherapy, and homeopathic therapies (3,8,9,10).

It has been proven that our cells emit electromagnetic signals and receive signals from the environment. When the normal electromagnetic balance of our cells is disturbed, diseases occur in the body due to pathogenic microorganisms (11). Bioresonance (MORA therapy) is a holistic, non-invasive therapy used for treating many diseases. The main principle of treatment is to improve overall health by detecting the electromagnetic frequency emitted by the affected organism and applying the frequency at the opposite frequency. This biophysical therapy was developed by German doctor Franz Morell and electrical technician Erich Rasche in the 1970s. Having long-term experience in electroacupuncture, the doctor developed bioresonance therapy because of long tests (12). Nowadays,

modern non-medical searches have increased for treating diseases. It is also believed that interest in complementary and alternative medicine therapies will increase even more over time (13).

There is increasing evidence in the literature that alternative therapies such as bioresonance, acupuncture, and hypnosis are effective in smoking cessation. The aim of this study was to investigate the success rates of patients receiving MORA therapy as a smoking cessation treatment, to examine the effectiveness of bioresonance therapy combined with NRT therapy in quitting smoking, to determine the effectiveness of bioresonance therapy in quitting smoking, and to evaluate the results.

Methods

Study Population and Design

A total of 1272 patients who applied to Selçuk University Faculty of Medicine, Family Medicine Smoking Cessation Polyclinic for bioresonance treatment between October 2010 and September 2019 were included in this study. These patients underwent a total of three sessions of bioresonance treatment at 15-day intervals to quit smoking. The success rates of the patients at the first and third months were recorded by questioning by face-to-face interviews and telephone checks. Smoking cessation patients were followed up on cessation day, after 7 days, 15 days, 1 month, 2 month and 3 months at the outpatient clinics, and then followed up with phone calls by researchers (it was free outdoor phone line) in the sixth month, first year, and during the second year following bioresonance therapy and recommended medication treatment. Patients who could not be reached during follow-up visits were not included in the study.

Ethical Approval and Informed Consent

The protocol of this study was reviewed and approved by the Ethics Committee of Selçuk University (approval number: 2019/264, date: 16.10.2019). An informed consent form was obtained from all patients or their legal representatives.

Overall Function and Clinical Evaluation

The sociodemographic characteristics of the individuals who applied to quit smoking, such as gender, age, height, weight, occupation, current complaints, and diagnosed medical diseases, were questioned. During the initial visit, any risk, presence of major depressive disorder, and presence of chronic medical illness were reviewed. Physical examination of all patients was performed, and the amount of carbon monoxide (CO) in the breath was measured. The Fagerstrom Test for Nicotine Dependence (FTND) was used to assess each patient's smoking addiction. According to FTND; 0-2 means very little nicotine dependence; 3-4 means low nicotine addiction; 5 indicates moderate nicotine dependence; 6-7 means high nicotine addiction; 8-10 means very high nicotine dependence. The study was analyzed using the chi-square test. Therefore, according to FTND, two groups were created: moderate and lower levels of nicotine dependence (0-5) and higher levels of nicotine dependence (6-10). Patients diagnosed with major depressive disorder and other psychiatric disorders at the first application were referred to the psychiatry clinic. These patients did not receive smoking cessation therapy.

Statistical Analysis

All data were recorded using the IBM Statistical Package for the Social Sciences (SPSS) 22.0 computer program (Armonk, NY). Frequency (n), percentage (%), mean ± standard deviation, minimum-maximum values were used as descriptive statistics to evaluate the data obtained from the study. The normality of the data was checked by the Kolmogorov-Smirnov normality test. The Kruskal-Wallis H test was used to compare more than two groups. All analyses were conducted within a 95% confidence interval. A $p < 0.05$ level was considered significant for statistical significance.

Results

A total of 1272 patients were interviewed, 991 of whom were male. The mean age of participants was 40.69±1.32 years. Table 1 summarizes the sociodemographic characteristics of the study population. When the patients were evaluated according to body mass index; 18.6% (n=236) were obese. The mean CO of patients was 12.64±7.96. Only 37.7% (n=480) of patients reported that they were very high nicotine dependence. 94.3% (n=1200) of patients preferred MORA bioresonance therapy as a treatment method for smoking cessation (Table 1).

Table 2 summarizes the classification of the treatment methods used by patients for smoking cessation according to the smoking cessation time. MORA bioresonance therapy was the most preferred method to quit smoking in the successful group on the 3rd day and 1st month (Table 2).

Table 3 represents the comparison of Fagerstrom Test Scoring with treatment methods. Compared to all other treatment methods, MORA bioresonance treatment; it was not found to be statistically effective in all nicotine addiction groups (p=0.132) (Table 3).

Discussion

Studies with large sample sizes and low risk of bias regarding MORA bioresonance therapy and smoking cessation interventions are very few in the literature. Concerning the results of this study, the effectiveness of bioresonance therapy was found to be more significant than that of all other treatment methods used in smoking cessation. Smoking is a complex and difficult phenomenon that includes psychological, physical, environmental, and familial factors. Nicotine is unfortunately just as addictive as other drugs like cocaine and heroin. Despite many effective and different smoking cessation treatments, there is still a large gap in this area. Studies show that a current smoker tries quitting smoking an average of 30 times or more before successfully quitting for 1 year or more (14).

There are many treatment methods that affect the smoking cessation effect. A review reported that acupuncture was less effective than nicotine gum. Additionally, there is no evidence that acupuncture is any less (or more) effective than behavioral interventions used to quit smoking (15). Vincent and Richardson showed that acupuncture is as effective as other treatment modalities in the early stages of nicotine withdrawal (16). For electrostimulation, six studies provide confidence that electrostimulation has no greater effect than placebo on smoking cessation (15). A review reported that bead and ear acupuncture were more economical than nicotine patches. In addition, they described

that acupuncture had a similar effect to NRT on smoking cessation and defined that acupuncture with an educational smoking program, counseling, or moxibustion was more effective as monotherapy in terms of prolonged smoking cessation (3).

In another study, Pihtili et al. (17) documented the efficacy of bioresonance therapy. According to the results of this study; bioresonance therapy is clinically effective in smoking cessation and does not have any side effects. Eisenberg et al. (18) according to their meta-analysis, the most successful results at the pharmacological level were obtained using varenicline. Oncken et al. (19) defined that 0.5 mg and 1.0 mg of varenicline tartrate twice daily were effective in smoking cessation. Marakoğlu et al. (20) in a study in which the patients showed the rate of smoking cessation in the 2nd year; the success rate (19.9%) of those using bioresonance therapy + varenicline was significantly higher than those using bioresonance therapy + bupropion (16%). These results are consistent with the findings of a randomized controlled trial conducted by Jorenby et al. (21). Barnes et al. (22) because of their meta-analysis study; they concluded that there is little evidence to determine whether hypnotherapy is more effective at smoking cessation than other forms of behavioral support or quitting unaided. Jang et al. (23) showed that

Table 1. Sociodemographic characteristics of patients (n=1272)		
Characteristics	**n**	**%**
Gender		
Male	991	77.9
Female	281	22.1
Age (years) mean ± SD (min.-max.)	40.69±1.32 (17-76)	
Age (years) categorical		
17-34	416	32.7
35-44	394	31.0
45 and ↑	462	36.3
Height (cm) mean ± SD (min.-max.)	172.41±8.52 (145.0-199.0)	
Weight (kg) mean ± SD (min.-max.)	78.21±14.86 (43.0-156.0)	
BMI (kg/m²) mean ± SD (min.-max.)	26.25±4.29 (14.74-46.46)	
BMI categorical		
Underweight (<18.50)	20	1.6
Normal weight (18.5-24.99)	508	39.9
Overweight (25-29.99)	508	39.9
Obesity (>30.00)	236	18.6
Occupation		
Student and housewife	175	13,8
Retired	149	11.7
Officer	302	23.7
Self-employment	646	50.8
CO mean ± SD	12.64±7.96	
FTND		
Very little ND	47	3.7
Little ND	141	11.1
Moderately ND	151	11.9
High ND	453	35.6
Very high ND	480	37.7
Packet/years smoking mean ± SD (min.-max.)	29.62±22.22 (1-256)	
Treatment methods		
MORA BT	1200	94.3
MORA BT + varenicline	24	1.9
MORA BT + bupropion	13	1.0
MORA BT + NRT	35	2.8
Total	**1272**	**100**

Values are presented as number (%) or mean ± standard deviation (range). BMI: Body mass index, min.: Minimum, max.: Maximum, CO: Carbon monoxide, FTND: Fagerstrom Test for Nicotine Dependence, ND: Nicotine dependence, MORA BT: MORA bioresonance therapy, NRT: Nicotine replacement therapy, SD: Standard deviation

Table 2. Classification of the treatment methods used by patients for smoking cessation according to smoking cessation time

Methods	Succesful group		Unsuccessful group			
	n	%	n	%	x^2	p
3rd day						
MORA BT	1080	91.0	107	9.0		
MORA BT + V	24	100.0	0	0.0		
MORA BT + B	11	84.6	2	15.4	4.340	0.227
MORA BT + NRT	29	85.3	5	14.7		
Total	**1114**	**90.0**	**114**	**9.1**		
1st month						
MORA BT	823	69.6	360	30.4		
MORA BT + V	16	72.7	6	27.3		
MORA BT + B	8	61.5	5	38.5	3.560	0.313
MORA BT + NRT	17	54.8	14	45.2		
Total	**864**	**69.2**	**385**	**30.8**		
3rd month						
MORA BT	583	50.0	584	50.0		
MORA BT + V	14	60.9	9	39.1		
MORA BT + B	4	30.8	9	69.2	4.540	0.209
MORA BT + NRT	12	38.7	19	61.3		
Total	**613**	**49.7**	**621**	**50.3**		
6th month						
MORA BT	448	39.6	683	60.4		
MORA BT + V	9	37.5	15	62.5		
MORA BT + B	4	30.8	9	69.2	0.662	0.882
MORA BT + NRT	11	35.5	20	64.5		
Total	**472**	**39.4**	**727**	**60.6**		
1st year						
MORA BT	386	35.3	707	64.7		
MORA BT + V	6	26.1	17	73.9		
MORA BT + B	1	7.7	12	92.3	5.771	0.123
MORA BT + NRT	8	27.6	21	72.4		
Total	**401**	**34.6**	**757**	**65.4**		
2nd year						
MORA BT	312	30.9	699	69.1		
MORA BT + V	5	25.0	15	75.0		
MORA BT + B	2	18.2	9	81.8	1.679	0.642
MORA BT + NRT	3	21.4	11	78.6		
Total	**322**	**30.5**	**734**	**69.5**		

MORA BT: MORA bioresonance therapy, V: Varenicline, B: Bupropion, NRT: Nicotine replacement therapy

Table 3. Comparison of FTND according to the treatment method

	MORA BT		MORA BT + V		MORA BT + B		MORA + NRT		Total		x^2	p
FTND	n	%	n	%	n	%	n	%	n	%		
0-5	320	94.4	10	2.9	4	1.2	5	1.5	339	100.0		
6-10	880	94.3	14	1.5	9	1.0	30	3.2	933	100.0	5.619	0.132
Total	**1200**	**94.3**	**24**	**1.9**	**13**	**1.0**	**35**	**2.8**	**1272**	100.0		

MORA BT: MORA bioresonance therapy, V: Varenicline, B: Bupropion, NRT: Nicotine replacement therapy, FTND: Fagerstrom Test for Nicotine Dependence

traditional and complementary medicine interventions did not have a statistically significant effect on increasing the success rate of smoking cessation. However, promising new results in auricular acupressure and hypnosis are also available in the literature (24,25).

Smoking is a difficult behavior to quit and quitting smoking requires a strong will. There are many factors affecting the quitting effect of smoking cessation, and we agree that it is important to compare different smoking cessation treatments. This study presents the first protocol to compare bioresonance therapy with other smoking cessation treatments in a large sample group, based on FTND scores in Turkey. In addition, there is a rapid increase in smoking cessation rates after the age of 45, and the smoking cessation rate for young people is less than 10% (26). In our study, 63.7% of our patients were younger than 45 years of age. Despite this, the fact that bioresonance therapy was found to be effective in smoking cessation increases the importance of the study and shows that bioresonance therapy is very effective in smoking cessation.

Study Limitations

One of the strengths of the study is that it includes all those who are the least likely to quit smoking and those who have the most difficulty in sustaining abstinence. Another strength of the study is that it evaluates the effect of bioresonance therapy on smoking cessation with 2-year data. In Turkey, the government pays for other pharmacological treatments used in smoking cessation from time to time. The patient's payment of money out of her own pocket for bioresonance treatment may have also affected the smoking cessation effect. Another study strength is that it was conducted in a large sample group by experienced physicians in an experienced smoking cessation clinic. There is no study in the literature similar to our study.

Conclusion

When MORA bioresonance treatment was compared with all other treatment methods, no statistically significant difference was found between the groups. Bioresonance treatments; Although it seems to be effective in many studies, there is a need for more scientific studies and more data to be presented. When the studies in the literature are examined, it can be said that bioresonance therapy can be used for supportive purposes in chronic diseases, combating addiction, and especially in cases where conventional medical practices are inadequate. Bioresonance treatments are becoming more widespread day by day both in the world and in our country and are in demand from patients; it can already be predicted that they will become much more widespread soon. We believe that this study will provide beneficial evidence for further studies on bioresonance therapy. It would also be beneficial to examine this study with larger randomized placebo-controlled double-blind studies comparing bioresonance with other pharmacological methods.

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