

Medical Treatment Method of Alzheimer's Disease & Parkinson's Disease by the Help of the Natural Musical Sound of Nây-ı Şerîf, Instrument of Ney (Ney: Turkish Reed Flute, Nay)

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Abstract

There are a great number of people who are suffering from Alzheimer's and Parkinson's diseases, both in Turkey and also all over the world. This article explains a project which may be a medical treatment method for the Alzheimer's and Parkinson's patients.

The musical sound of Nây-ı Şerîf, instrument of Ney (Ney: Turkish Reed Flute, Nay) is the sound which is closest to the human voice, so it is a natural sound source. There have been scientific findings that the brain produces irregular "Gamma Signals" (γ) in both Alzheimer's and Parkinson's diseases. The natural musical sound of Ney instrument will be able to provide a positive effect for the treatment of both Alzheimer's and Parkinson's diseases. Apart from that, the frequency rates of the sound of Ney instrument can be increased to very high values with use of special amplifier equipment, and elimination of the impermeable layer in the blood brain barrier can be provided. The sound of the Ney instrument will be a natural primary source and then the frequency of this primary voice will be increased to a high rate, causing a huge sound energy production, so the energy transfer process with a thermodynamical interaction stated by "ELMAS's Theory of Thermodynamics" may partially or totally eliminate the impermeable layer in the blood brain barrier of Alzheimer's patients.

At least, the negative effects can be slow down, the main medical drug treatment can take the body control again, so the treatment of the patient change for the better. This medical treatment method can also be accepted as a kind of music therapy and shall definitely increase the life quality of the Alzheimer's and Parkinson's patients.

Keywords: Alzheimer's Disease; Parkinson's Disease; Nây-ı Şerîf; Instrument of Ney; Turkish Reed Flute; Nay; Energy Transfer; ELMAS's Theory of Thermodynamics; Gama Waves; Frequency; Music Therapy

Introduction

There are a great number of people who are suffering from Alzheimer's and Parkinson's diseases, both in Turkey and also all over the world. This article explains a project which may be a medical treatment method for the Alzheimer's and Parkinson's patients.

The musical sound of Nây-ı Şerîf, instrument of Ney (Ney: Turkish Reed Flute, Nay) is the sound which is closest to the human voice, so it is a natural sound source. There have been scientific findings that the brain produces irregular "Gamma Signals" (γ) in both Alzheimer's and Parkinson's diseases. Working with gamma frequencies (γ), neurotransmitters used

in the connection of neurons in the brain are enabled to establish synaptic connections more quickly. Thanks to the brain's operation with gamma frequencies (γ), the connections between neurons and the memory capacity will increase. It has been put forward that simultaneous neuron firing in the networks connecting the thalamus and cortex in the brain is around 40 Hertz, meaning that the sensations of shape, color and movement can be perceived better [1-27].

Method, Findings and Discussion

Gamma waves (γ) have a frequency range of 30 Hz and above, especially within the interval of 30 Hz to 100 Hz. In general, brain oscillations greater than 20 Hertz are known as gamma

frequencies (γ). Gamma waves (γ) have very low amplitude (variable amplitude rates in terms of microvolts - μV) and are also the fastest waves in the brain. The natural musical sound of Nây-ı Şerîf, instrument of Ney, is able to provide the Gamma waves (γ) which can motivate the brain's operation and strengthen the connections between neurons. Moreover, the sound of the Ney instrument is the closest sound to the human voice. In addition, the musical sound structure of the Ney instrument contains the frequency values of other waves which are included within the EEG (Electroencephalography) Bands, i.e. delta waves (δ) (0.5-4 Hz frequency interval); theta waves (θ) (4-7 Hz frequency interval); alpha waves (α) (7-12 Hz frequency interval); beta waves (β) (12-30 Hz frequency interval), as well. The amplitude rates of delta waves (δ) (1-120 μV amplitude interval); theta waves (θ) (20-100 μV amplitude interval); alpha waves (α) (30-50 μV amplitude interval); beta waves (β) (5-30 μV amplitude interval); gamma waves (γ) (variable amplitude rates in terms of μV), respectively [23].

The **Figure 1** shows a photograph of Nây-ı Şerîf, instrument of Ney (Ney: Turkish Reed Flute, Nay).



Figure 1: Nây-ı Şerîf, instrument of Ney (Ney: Turkish Reed Flute, Nay).

Apart from that, the frequency rates of the sound of Ney instrument can be increased to very high values with the use of special amplifier equipment, and elimination of the impermeable layer in the blood brain barrier can be provided. The sound of the Ney instrument will be a natural primary source and then the frequency of this primary voice will be increased to a high rate, causing a huge sound energy production, so the energy transfer process with a thermodynamical interaction stated by "ELMAS's Theory of Thermodynamics" [26] may partially or totally eliminate the impermeable layer in the blood brain barrier of Alzheimer's patients. ELMAS's Theory of Thermodynamics" introduces a scientific approach for 5th Law of Thermodynamics which is a theoretical application example for medical thermodynamics and is revealed by Emin Taner

ELMAS who is the author of this article. The frequency rate increase operation will be realized by means of an ultrasound machine and related equipment. The formula of $V = \lambda \times f$ is applicable for the ultrasound machine; where "V" is the velocity of the sound wave (m/s), " λ " is the wave length (m) and "f" is the frequency rate (Hz or 1/s). Since the speed of sound will be constant in a certain environment, as the frequency increases, the wavelength of the sound becomes shorter. As the wavelength gets shorter, the energy amount will increase. $f = 1/T$, where "f" is the frequency rate (Hz or 1/s), "T" is the time (s). $E = h \times f$ known as Planck Formula, where "E" is the energy (joule - j), "h" is the Planck Constant ($6,626\ 06957 \times 10^{-34}$ j.s), "f" is the frequency rate (Hz or 1/s).

$E = h \times V/\lambda$, where, "E" is the energy (joule - j), "h" is the Planck Constant ($6,626\ 06957 \times 10^{-34}$ j.s), "V" is the velocity of the sound wave (m/s), " λ " is the wave length (m).

The sound has 3 dimensions, the first dimension is "frequency" (Hz), the second dimension is "sound intensity" which is the average energy passing through unit area per unit time (watt/cm²), the third dimension is the "time" (s). The weakest "sound intensity rate" (Sr) that the human ear can hear is 10-16 watt/cm² and this value is accepted as 0 (zero) on the decibel (dB) scale. The formula is given by $\text{dB} = 10 \times \log((\text{So})/\text{Sr})$, where "Sr" = 10-16 watt/cm², "So" is the "sound intensity rate" or "energy rate" (watt/cm²). If the "energy rate" or "sound intensity" in terms of (j/cm²) and the time period this energy is applied in terms of (s) are known; the decibel (dB) rate can be calculated accordingly [1-27].

Conclusion

Therefore, the natural musical sound of Ney instrument will be able to provide a positive effect for the treatment of both Alzheimer's and Parkinson's diseases. At least, the negative effects can be slow down, the main medical drug treatment can take the body control again, so the treatment of the patient change for the better. It is also possible to say that this medical treatment method must be regarded as serious and must also be considered with an interdisciplinary approach and to be applied for the patients who are suffering from Alzheimer's and Parkinson's diseases. This medical treatment method can also be accepted as a kind of music therapy and shall definitely increase the life quality of the patients. [1-27].

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