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Review Article

The 21st Century Approach - No Average Patient. A Noninvasive Measuring of Drug Sensitivity

Maria Kuman*

Holistic Research Institute, 1414 Barcelona Dr., Knoxville, Tennessee, USA

***Corresponding Author:** Maria Kuman, Holistic Research Institute, 1414 Barcelona Dr., Knoxville, Tennessee, USA.

E-mail: holisticare@mariakuman.com

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Abstract

Clinical research shows that humans have different: drug, stress, and emotional sensitivity. Usually, the drug-sensitive individuals are also stress sensitive and emotionally sensitive. If so, there is no such a thing as an average patient. The dose for a low-sensitive patient would almost kill the high-sensitive one by triggering a bouquet of allergic reactions. The presently existing methods for testing drug tolerance requires ingesting of the drug, which means the intolerance is detected after the harm is done. The only exception is the Holiner's drug testing, which is complicated, time consuming, and does not have the accuracy of our method. The amount of released neurotransmitters could be a measure of sensitivity, but this would require blood drawing. Since the neurotransmitters are electrically charged, we offer electrical measurements to measure the drug, stress, and emotional sensitivity of patients (we used our sensitive patented equipment). The drug tolerance and drug sensitivity can be tested when the drug is prescribed - it is fast and non-invasive. Based on measurements, the patients would be divided into three basic groups: low, middle, and high sensitivity and each group would be prescribed different dose according to their sensitivity to drugs. This article also explains why the mathematical description of sensitivity would require nonlinear quantum mechanics.

Keywords: *Measuring Stress Sensitivity; Measuring Drug Sensitivity; Measuring Emotional Sensitivity; Sensitivity and Stress-Induced Disorders; Why Nonlinear Quantum Approach*

Introduction

Presently, the drug testing usually requires ingesting of the drug. The intolerance is detected after the harm is done. The only exception is the Holiner's drug testing, which is complicated, time consuming, and does not have the accuracy of our method. Sensitivity could be measured with the amount of released neurotransmitters, but this would require blood drawing. Since the neurotransmitters are electrically charged, we offer electrical measurements with our sensitive patented equipment to measure the drug, stress and emotional sensitivity of patients.

Clinical studies of Prof. I. Wickramasekera [1] demonstrated that highly emotional individuals exhibit high stress sensitivity as well. Prof. I. Wickramasekera [1] and independently Dr. ML Zinn [2] showed that highly emotional people are not only more stress-sensitive, they suffer more somatic diseases and stress-related chronic diseases or cancer.

Clinical studies of Prof. I. Wickramasekera (1974 - 1994) [3] and independently HM Pettinati., *et al.* [4] indicated that hypnotizability is specific for stress-sensitive individuals, who suffer more stress-related disorders. All above features: emotional sensitivity, stress sensitivity, and hypnotizability are related to neurotransmitters.

The neurotransmitters are "emergency" substances pre-synthesized and stored in vesicles at the neurosynaptic junctions, ready to be released at emergency situations. When a necessity for fast response arises, the neurotransmitters at all neurosynaptic junctions are released simultaneously. This puff induces abrupt changes in the body parameters, which resemble quantum effect.

Although emotional sensitivity is measured with the amount of neurotransmitters glutamates released per unit time and stress sensitivity is measured with the amount of neurotransmitters adrenaline and noradrenaline released per unit time, both would require quantum description because although the involved neurotransmitters are different, they are released in puffs or quants.

Emotionality, stress, and stress-related disorders

When stressors endanger our life, our body mobilizes for response to them - to fight or flight, adapt or resist. Heat, cold, electromagnetic fields, etc. are physiological stressors; emotional fear, anger, grief, and jealousy are psychological stress. The mobilization reaction of the body, called stress, involves release of neurotransmitters and hormones.

The first step of each mobilization reaction is called alarm signal [5]. During it, the adrenal glands release the hormone cortisol and the neurotransmitters adrenalin and noradrenalin, which raise the body energy from level E_1 to level E_2 to fight with or flight from the stressors, which could be life threatening. The quant of energy, received by the body at such mobilization, will be $\Delta E_{stress} = E_2 - E_1$.

The body is also mobilized when a vitally important problem needs to be solved. Thus, regardless of the fact are we dealing with physiological, psychological stress, or are we solving a vitally important problem of which our life depends, neurotransmitters and hormones are secreted and the body is mobilized, once the signal for this appears ([5], p. 63-64).

At each mobilization for response, called stress, the quant of energy $\Delta E_{stress} = E_2 - E_1$ added to the body depends on the amount of secreted hormones and neurotransmitters, which is different for different individuals. The higher the sensitivity of the individual, the higher the amount of hormones and neurotransmitters depleted per unit stressor per unit time.

Highly sensitive individuals will have larger amount of neurotransmitters released at each neurosynaptic junction i, and for them the quant of energy at each junction i (ΔE_i) will be larger. The neurotransmitters released at n neurosynaptic junctions will lead to an energy change $\Delta E_{stress} = \Sigma \Delta E_i$ (i= 1, 2, 3… n). (For simplicity we have used simple summation, but the dependence is nonlinear, which will make even more essential the number of neurosynaptic junctions in the brain, which is proportional to the memory storage).

Therefore, for stress-sensitive individuals, the quant of energy ΔE_{stress} added to the body, during each mobilization reaction for stress response, will be larger because more neurotransmitters are released. This will make their energy pumping more efficient, which means they would adapt to stressors faster. However, when the stress is prolonged or strong their genetically inherited weak organ would reach faster the critical level of its stress tolerance (after fewer stressors j) and suffer chronic disease.

Clinical studies of Wickramasekera and Zinn did show that sensitive individuals developed faster (after fewer stressors) stress-related heart diseases, chronic diseases, or cancer. Stress damages first the genetically inherited weak organ with lowest energy, which first reaches the limit of its stress tolerance (the ultimate stress that the organ can endure) [6].

The clinical findings of Prof. Wickramasekera [1] and those of Zinn show that emotional individuals are usually stress sensitive. This mean that emotionally sensitive individuals with large amounts of secreted neurotransmitters of excitation, glutamates, will also have large amounts of secreted adrenalin and noradrenalin from their adrenal glands, which determines their high stress sensitivity.

Obviously, if somebody is sensitive, he is sensitive to everything. He is emotionally sensitive, stress sensitive, and drug sensitive. This puts the emotional people, who are more creative but also more stress sensitive, at higher risk of developing somatic disorders and other stress-related disorders like heart diseases, chronic diseases, or cancer. However, their chances for spontaneous remissions through

meditation are also higher. For these sensitive individuals, alternative therapies like homeopathic remedies, acupuncture, and herbal remedies are more appropriate than the pharmaceutical drugs, which are too strong for them.

The spontaneous remission is quantum healing

Dr. Chopra called the spontaneous remission quantum healing [7] without explaining why the spontaneous remission should be quantum in character (he is a medical doctor, not a physicist). Here is the explanation: Spontaneous remission is usually achieved after a long period of persistent meditation when the state of enlightenment is reached, in which the conscious and the subconscious were made to work at the same level of over-excitement [8]. Enlightenment means that the person is sure that he is going to be healed.

The achievement of this state of over-excitement is done in quanta. Each quant of energy is caused by a puff (quant) of secreted neurotransmitters of excitation glutamates. However, these quanta are not universal (as they are in the normal quantum mechanics). They are different for different individuals and their amount is larger for emotional and stress-sensitive individuals.

Since the emotional individuals have larger amount of glutamates released per unit time and their quant of excitement ΔE_j is larger, they will achieve spontaneous remission faster, i.e. after lesser number of transcendental meditations. Therefore, emotional and stress-sensitive people have better chances for spontaneous remission through transcendental meditation (or biofeedback) (For transcendental meditation being as effective as biofeedback [9]). This means that if we know the emotionality of an individual, we can determine his chances for spontaneous remission.

Measuring sensitivity

Since each sensitive individual seems to be: emotionally sensitive, stress sensitive, and drug sensitive, the article offers evaluation of the emotional, stress, and drug sensitivity of each patient before treatment. Since sensitivity is measured with the amount of neurotransmitters released per unit stressor and the neurotransmitters are electrically charged, we measure the electrical response of each individual to a unit stressor (mild laser) to determine his sensitivity.

I have patented equipment with a low intensity He-Ne laser built into it. Individuals with different sensitivity would respond to laser light with the same intensity differently. According to the strength of their reaction, the patients were divided into three basic groups: low, middle, and high sensitivity. The low sensitive group was getting the normally prescribed drug doses, but the high sensitive group was getting only parts of them.

A direct drug testing is also possible. Measuring with our sensitive equipment the electrical characteristics of the Solar Plexus and measuring the same point when the patient holds the drug will give us information about the tolerance to the specific drug. If the measured energy at the Solar Plexus drops down dramatically, there is intolerance to the drug. If it drops some, try to reduce the dose to achieve tolerance.

Every patient need to be checked for drug sensitivity because what is right for the low sensitive individuals will more damage than help the high sensitive individuals. For the high sensitive individuals, milder approaches like homeopathic remedies or acupuncture would be more appropriate, and for them the chances for spontaneous remission would be definitely higher.

Nonlinear quantum approach is needed

Since the neurotransmitters of stress (adrenaline and noradrenaline) are released in puffs or quants at every neurosynaptic junction, the mathematical description of all stress-induced disorders (chronic diseases and cancer) would require nonlinear quantum mathematics, and so would the spontaneous remission [6].

If so, nonlinear quantum approach would also be needed to describe mathematically the higher stress sensitivity of emotional individuals and their higher risk to become chronically sick or develop cancer, as well as their better chances to experience spontaneous remission.

Nonlinear quantum mechanical modeling

In 1997, P. Nattermann [10] offered a nonlinear quantum-mechanical equation applicable to a media with changing density ρ. It was an improved version of the nonlinear quantum-mechanical equation of Mielnik of 1994, to which Bialynski-Birula and Mysielski [11] added a logarithmic term in 1976 and Doebner and Goldin [12] added three nonlinear terms in 1994. During stress the neuron junctions are flooded with neurotransmitters. This makes the media inhomogeneous or with changing density, which gives us the right to use for our purpose the equation of Natterman [10]:

$$i\partial_t \psi_t = iv_1 (\nabla . J/\rho)\psi_t + iv_2 (\Delta\rho/\rho)\psi_t + \mu V\psi_t + \mu_1(J^2/\rho^2)\psi_t + \mu_2 (J\Delta\rho/\rho^2)\psi_t +$$
$$+ \mu_3 (\nabla\rho.\nabla\rho/\rho^2)\psi_t + \alpha \ln\psi_t^2\psi_t$$

Conclusions

Since sensitivity is determined by the amount of neurotransmitters and the neurotransmitters are electrically charged, in this article we offer a noninvasive way to measure the sensitivity of individuals to stress and drugs through electrical measurements. Based on these drug and stress sensitivity measurements, we offer the individuals to be divided into three basic groups: low, middle, and high sensitivity [13].

Each group must be medically treated differently depending on the patients' sensitivity. The low-sensitive patients get the normally prescribed drug doses. The high-sensitive patients are either treated with much lower doses pharmaceutical drugs, or they are referred to acupuncturists, homeopathic doctors, or herbalists. This would drastically reduce the allergic reactions, which are so frequent among the high-sensitive individuals.

The offered here non-invasive measurements of the individuals' sensitivity would allow determining of the best amount of drug for each individual, which will heal but not harm.

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