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Commentary on the Practice of Medicine (6): The Connected Universe

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A CONTROVERSIAL ISSUE

A simple, well-accepted definition of Medicine, according to Oxford English Dictionary, refers to "the practices and procedures used for the prevention, treatment, or relief of symptoms of diseases or abnormal conditions". The American Medical Association states that its "core" purpose is "to promote the science and art of medicine and the betterment of public health". In other words, in its essence, medicine has health as its utmost goal. But what can we do as medical doctors to promote health? It all goes fine when it comes to known, scientifically approved drugs or therapeutical techniques proposed for the prevention and treatment of diseases, but, when it comes to beliefs and practices that are not "medically proven", or "scientifically proven", it all becomes a much more controversial issue. However, I wonder, how to decide on what should be approved and, in consequence, what should not be accepted as a medical doctor's recommendation for someone's health? So hard to have a simple answer for that. Maybe some (not necessarily all) of these beliefs and practices are not proven in our compendiums, guidelines and textbooks of Medicine, but wouldn't they have been proven by some other field of science or even by common ground? Can't we use some "not 100% scientifically proven knowledge", but which we consider that can be of benefit to our patients? The 5P Medicine (Personalized, Preventive, Participative, Predictive and Pluri-expert) [1] includes a more Participative Medicine which values different approaches to reach safe ways towards health optimization and health maintenance. Therefore, I wonder the reason why a medical doctor doesn't seem to be allowed to use any other therapeutical techniques which are not included officially in the medical course curriculum. In other words, a medical doctor seems to be allowed to be "only" a doctor, even if he is qualified to do other things. This happened to acupuncture in my country, for instance. "The attempt to establish acupuncture in Brazil was marked mainly by the rejection of the medical class; as a result, the introduction and initial development of this age-old practice were carried out by professionals from other areas. In this perspective, acupuncture went through a period characterized by marginalization before being effectively accepted by the medical profession" [2]. Notwithstanding, some doctors did include acupuncture in its medical practice before it was approved, going against the rules, but confident that one day it would be recognized as a great alternative treatment, as it did happen. In short, this is probably a very philosophical and ethical matter to write about, but I just want to say that I feel the need of some agreement on what is "in the right" of physicians to include in the recommendations for their patients - as long as they are not associated to some sort of "harm" - so that no doctor will so easily be under accusations, as it happened to me. What makes things even worse, in my case, is that I didn't really use any different healing approach at all.

AGING THROUGH AN OPERATIONAL WAY: A RATIONAL APPROACH

I work as a clinical nutrition practitioner. The first and second appointments with me happen in a very systematical way. 1. I explain to the patients the concepts of Age Management, Health Optimization, and Applied Healthspan Engineering [3]; 2. I evaluate the patients signs and symptoms, listening to their complaints, lifestyle and everyday routine, personal and family history of diseases, diet and use of supplements, medications, and so on; 3. I order a thorough nutritional, metabolic and hormonal evaluation and their nutrigenomics panel, if they haven't done it yet; 4. A few weeks later, when they come back for the second meeting, I include the test results in digital tables with green, yellow and red colored cells (if they are optimal, sub-optimal or altered results, respectively) and correlate them with the patient's data collected previously. I must say that the additional visual information with the colors on the tables is very useful; 5. Finally, I prescribe supplements and dietary recommendations and set the data for the next appointment in approximately 4 months. In other words, I

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tend to follow a settled and detailed pattern of evaluation, prescription and follow-up. It was all inspired by the Italian researcher Paolo Giacomoni when he said that "it became necessary to define aging in an operational way, such that the definition allowed scientists to assess quantitatively whether a treatment has the capacity to provoke, accelerate, hinder, slow down or even reverse the aging process" [4]. So, in my practice, I tend to have a very down-to-earth, analytical way of taking care of my patients.

MAY THE PATH BE BEAUTIFUL FOR EVERYONE

Out of my office, I was used to (not anymore) doing other things which may be considered not related to Clinical Nutrition, although they might nurture someone's mind and spirit. I would write about some holistic approaches to health, such as meditation & mindfulness, yoga, stress management, energy therapies, heart & brain coherence, and others. I would mention the work of some scientists, researchers and healers that I somehow admire, such as Joe Dispenza, Gregg Braden, Bruce Lipton and Nassim Haramein. I would describe some simple habits that, I believe, have particularly effective healing properties, such as bathing in the sea or walking on the grass. Every now and then I would send to patients some nice songs, beautiful poems or texts about faith, hope and resilience, you know, lots of interesting and widely spread information which anyone can have access to anyway, if they are connected to the internet. True, they are not ordinary topics I talk about during the medical appointments themselves, but what's wrong to propose them to my patients? You see, once I made a post on "The Sacred Path of Beauty" [5,6], an expression used by the North American indigenous people. Sacred path refers to the right way to live, a harmonious way of life that helps Creation to continue, that moves us forward spiritually to cure ourselves and the planet Earth. In fact, one unifying feature of the Native American beliefs is the concept of the "Red Road", which invokes, substantially, "the right way through life." The awakening of my patients to something more meaningful in life is the purpose of using this complementary information so that they might learn to follow their instincts better and make the right choices to be at peace, one of the fundamental pillars of health. Peace is flow, peace is lightness, peace is truth, peace is what makes sense to us. It can certainly influence, for the better, the functioning of our brain, the organ that controls and coordinates our actions and reactions, allows us to think and feel, and enables us to have memories and feelings. In short, the organ that makes us humans. This innocent post was considered improper, subject to judgement.

BEYOND REPAIR

Surprisingly, for the post mentioned above and others, I was considered to have violated the 112nd article of the Brazilian Code of Medical Ethics: Art.112: It is forbidden for the doctor to disclose information on medical matters in a sensationalist, promotional or untrue way. The accusation went further by saying that, as a doctor, I assume a posture similar to that of a shaman, a healer or a mere charlatan. It might sound like a bad joke, but it is true. Once more, no patient involved, no harm done. Just colleagues against me. Who or what is behind this? I honestly don't know. So, I decided to write scientific articles to be published in official scientific journals, because it was pointless to try to defend myself. I don't mean any sort of revenge, but I simply want to make it clear and registered that I disagree with most things that were made public about me.

WHY NOT SOME SHAMANIC INSPIRATIONS?

To be honest, I think there's a lot of prejudice in the accusation of "being a shaman or a healer". I would feel quite privileged if I had some shamanic insights. And we, medical doctors, are supposed to be healers anyway. Only a "mere charlatan" sounds really degrading. However, have you heard of a shaman that works with Nutrigenomics, Age Management Medicine and Applied Healthspan Engineering? I would think that they all sound like an odd combination with shamanism. When I listen to the patient during our appointments, I am always thinking about gene expression and possible mutations in the genes. As you might know, genetic mutations are changes to our DNA sequence. Not all genetic mutations lead to genetic disorders. Some genetic mutations don't have any effect on our health and well-being and some may even have positive effects [7]. However, with this nutrigenomics panel in hand, we are able to identify the presence of polymorphisms and correlate them with the patient's laboratory test results, symptoms, personal and familiar history of diseases, and so on. In the end, we can prescribe diet and supplements more assertively. That's what I call Assertive Prescription. Let's give some simple examples on how the nutrigenomics panel can help us to decide about the recommendations on diet and supplements.

GENE: BCMO1 (beta-carotene 15,15'-monooxygenase 1) [8]:

This gene is associated with the synthesis of an enzyme that converts the precursor vitamin A (pro-vitamin A or beta-carotene) into active vitamin A (retinol). The active form of vitamin A is required by the photoreceptors of the eyes, stem cells, immune cells, red blood cells and embryonic cells. Vitamin A deficiency is shown to be associated with night blindness (or, in severe cases, complete blindness), severity of infections, as well as with certain skin conditions, like acne. People with certain variants of the gene are associated with nearly 60% reduction in enzyme activity [9]. If a patient has low levels of vitamin A, to know if they have mutations on this gene helps us to identify whether there is not enough beta-carotene and preformed vitamin A in their diet or, else, if they might not convert appropriately beta-carotene into vitamin A. The ingestion of vitamin A itself can be not enough through diet alone, because it is present in animal-based food sources and some are considered pro-

inflammatory, such as beef liver, eggs and dairy products. So, in cases of variations of risk in the BCMO1 gene, we can consider the use of supplements of vitamin A to optimize vitamin A levels, once the ingestion of beta-carotene sources (such as spinach, kale, carrots, broccoli, papaya and sweet potato) will not be sufficient for the poor converters [10].

GENE: NQO1 (NAD(P)H quinone dehydrogenase 1) [11]:

This gene is a member of the NAD(P)H dehydrogenase family and encodes a cytoplasmic reductase enzyme. This protein reduces quinones (such as the well-known coenzyme Q10, that is, oxidized ubiquinone or o-CoQ10) to hydro quinones (reduced form ubiquinol or r-CoQ10). CoQ10 in its both forms have antioxidant and bioenergetic properties, both crucial to the ageing process. However, ubiquinol is considered a more potent lipophilic antioxidant. Many studies have provided evidence of their role on the prevention of UVB- induced skin damage and photoaging [12,13]. Also, they have stimulatory effects on collagen production and additional anti-aging effects [14,15]. A 2021 study, "Anti-ageing effects of ubiquinone and ubiquinol in a senescence model of human dermal fibroblasts", concluded that "the results highlight the pivotal role of CoQ10 for skin vitality and strongly supports the use of both forms (oxidized and reduced) as a beneficial and effective anti- aging skin care treatment" [14]. On top of that, CoQ10 plays a key role key role in mitochondrial oxidative phosphorylation (energy production), as well as directly mediating the expression of a number of genes, including those involved in inflammation [16]. Therefore, the presence of mutations in the NQO1 gene makes it recommended to prescribe not only ubiquinone (more available), but, mainly, ubiquinol, its reduced and more potent form.

GENE: VDR (vitamin D receptor) [17]:

This gene encodes vitamin D3 receptor. Downstream targets of vitamin D3 receptor are primarily involved in mineral metabolism, though this receptor regulates a variety of other metabolic pathways, such as those involved in immune response and cancer. It has broad expression in the intestines (mostly in duodenum and colon) and many other tissues (kidney, skin, appendix, gall bladder and others) [18]. Several genetic variations have been identified in the VDR gene [19,20] and there are other genes related to vitamin D metabolism. To know the gene mutations makes us understand the different responses to vitamins D3 supplementation and helps us to decide which dose to prescribe and the best route of administration to increase the patient's vitamin D levels more efficiently (oral, sublingual or intramuscular).

All this to justify that I have no mind for shamanic inspirations, really. On the other hand, many people wouldn't mind being assisted by a medical doctor with a posture of "a shaman or a healer", who would most likely raise up the level of the conversation to some deeper or more sublime topics which we, doctors, don't usually address during our appointments. Apparently, we would have no right to do so anyway.

TO DEEPEN OUR CONNECTIONS

Since I watched the video "The Connected Universe" [21] in which the physics researcher Nassim Haramein explains how we are connected to everyone in the world, I started to see things and accept them in a much more profound way. He asks in the video: "How would your life change? What if you could see the patterns, see the beauty? New ideas in science. Deepen your connection to nature, to the stars, to each other. Learn to see the world differently". Well, it did change my life. I truly believe that people would think twice about doing harm to another person - in our context, medical doctors against their own colleagues - because, true, it is all connected: actions, thoughts, emotions. Although, to me, these last years of "accusations" brought me a lot of suffering - Joe Dispenza would say it was my "dark night of the soul" - it also awakened me to a life greater than what I ever consciously deemed possible. So, I would like to suggest that all physicians watch the video "The Connected Universe". Let's make this network of good vibrations, a real pattern of connection between us to save ourselves in the first place, so that we might truly be able to help our patients to cure themselves. Bring back at least some Medicine of the old days. With love and glory.

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