

Biorezonance – history, principles and first experiences in acupuncture practice

Summary:

Biorezonance was developed as a method of treatment based on empiric findings. The following article shows how historically this empirical knowledge was build, which theoretical backgrounds accompanied its development and shows scientific evidences of the effect of bioresonance therapy that are currently available. At the end of the article, there are summarized near to one-year practical experiences of the author with this treatment within her acupuncture practice.

Key words:

Bioresonance, memory of water, transfer of information, cell communication, preclinical and clinical studies

History:

In the sixties Dr. Reinold Voll created, for acupuncturists a familiar method known as EAV- electroacupuncture by Dr. Voll, which works on the basis of measuring of electric potential in the systems of points of Voll's meridians. Accordingly, he invented also so called Voll's medication test. He accidentally found that the pathological test values, measured on points of liver meridian of his patient all of the sudden went to the physiological range. When he excluded the possibility of the error of the measurement, he noticed that the patient was holding a homeopathic remedy in her hand. After putting away of this remedy, the test values, measured on the points of this meridian, went back to their original pathological range. After it turned out, that also a contact of the remedy with a patient, which is mediated by a connecting cable, connected with the measuring device, causes changes in the test values of the electric potential. Findings of Dr. Voll were the basis for the work of Dr. Franz Morell and an electroengineer Erich Rasche. Their work was then focused on the transfer of information from the remedy on patient without the need of a connecting cable. They couldn't back their proposals with any measuring on a conventional measuring device but they supported the assumptions of the transfer of information from the remedy on a testing person by watching the effects of its transfer on the living organism and by the changes in test values of acupuncture points. After, Dr. Morell came with a proposal, that if the information from the

remedy significantly adjust the test values of an organism, then a very similar information must be present also within this organism. Together with Rasche, they invented a device called MORA, which was designed to read out the information from the body of a patient, then modulate this information and sending it back to patient. There was placed an electrically conducted electrode on patient's affected area of the skin, which was connected to the device by a cable. The modulation of the information (inverting it by means of phase shift) took place in the device. Then the information was sent back to the patient through another electrode. With this kind of applied method of treatment, a clinical improvement or even the complete healing of some patients, was found in the majority of cases. MORA device was thanks to the technological advance even further improving and this method of treatment was called bioinformation, later bioresonance - a phenomenon of a resonance applied on biological systems through the transfer of information [1]. In this point in time, there still weren't any scientific working hypotheses, from which a clarification of the effects of this treatment could possibly be made. But still, the bioresonance method started to gradually develop and it started solely as a result of the experiences of its users.

New types of electrodes were gradually developed - rigid, flexible, magnetic or dental. An elaboration of different indication-based therapeutic programs occurred and subsequently it led to the development of different types of bioresonance devices for diagnostic assessment and therapy.

Theoretical basis and principles

Nowadays there are 3 basic theoretical conceptions, on which we can build our understanding of the bioresonance operation. These are the **memory of water**, **transfer of information** and a **cell communication**.

Water is the basic substance, which determines the formation and existence of life on Earth. It has specific physical properties, it is the only substance, which is lighter in its solid form than in the liquid form and it has the highest density in 3,98 °C. Many scientists believe, that the reason of this "anomalous behavior" of water are the physical properties of the hydrogen-bridge bonds. Bilateral forces not only hold each molecule of water together, but also create bonds of different power with the neighboring molecules. This leads to the formation of molecular chains, which can create different space structures. Tetramer of 4 molecules of water can create different shapes- a chain, ring, star, lasso and tetrahedrons. These extended molecular complexes are called clusters and nowadays are the subject of intensive scientific examination. The bigger clusters form icosahedral networks with 280 or more molecules of water and can be examined with laser spectroscopy. In its liquid state, there can be detected different cluster structures depending on the pressure, temperature and external influences. When the molecules of another substance are added to water, there are immediately

created new cluster structures that surrounds these molecules. These newly-formed structures can be detected even when the molecules, which caused their creation, are no longer present. Each cluster structure has its specific frequency spectrum. Imagine the immense amount of information that can be stored in 3-dimensional multi-molecular cluster structures of water. It is also conceivable, that these cluster structures can be destroyed or newly build by the means of the resonance phenomenon- by homeopathy or bioresonance with specific frequencies. What is this proposal supported by?

Already in the year of 1988 Jacques Benveniste together with 10 other colleagues published an article in the scientific journal Nature about the memory of water. Although he was accused of being esoteric by the representatives of the official science and he eventually lost his laboratory and funding, he continued in his research. He assumed that the memory of water and its transfer are somehow connected with the electromagnetic oscillation [1].

A biochemist professor Madeleine Ennis came to a surprising result in this area. His goal was originally to disprove the effect of homeopathy. He was gradually diluting the solutions with the active substance until the point, in which it wasn't possible to detect any molecule of the active substance within the solution. He found out that the specific biological effect of the original active substance remained to be present even within the "pure" water. The results of his findings were proved by the double-blind trials, realized in 4 laboratories in France and Italy. This memory of water could be revoked by heating of the solutions to more than 70 °C and by low frequency alternating magnetic fields [1].

It could be assumed that this impact destroys specific cluster structures.

Other experiments were done and published by Anderson and Reid. These scientists found out that in the water solution of NaCl, there formed cubic crystals but after adding of a bovine serum albumin, the crystal formations were modified into different dendritic crystal forms. It was interesting, that the information for the creation of the different crystal forms was transferred from the solution with the content of albumin into the "non-informed" solution - a solution with no presence of albumin, through a platinum cable [2].

The research of Prof. C.W. Smith also supports the existence of the memory of water. Prof. Smith was homeopathically diluting the allergens, which were triggering serious food allergies in patients and he found out, that specific dilutions are triggering allergic reactions and some dilutions are stopping the symptoms or even cause the disappearance of the symptoms. The observed effects were present also when the solutions used, didn't contain any molecule of the active substance. He replicated these experiments with the use of a frequency generator and found, that specific frequencies are triggering the allergic reactions and other frequency ranges are having a positive effect on these allergic reactions [3].

The potential to absorb, store and transfer the information in the form of electromagnetic oscillatory patterns is present not only in water but also in all

organic biomolecules as e.g. amino acids, sugars and nucleotides with a special role of DNA, which encodes the whole genetic potential. The space structure of DNA possibly functions as a mini antenna, through which the cell can communicate with neighboring cells and also with distant tissues.

Prof. Fritz Albert Popp deserves the credit for detecting the electromagnetic oscillatory patterns, emitted by cells in the form of light particles or light quanta. He named these light quanta biophotons and considered them as essential for the cell metabolism and its regulation. According to him, the electromagnetic oscillatory field regulates all metabolic processes through biophotons. A question emerges, of how all of the cells of body can find an information addressed for them in a billions of oscillatory information that surrounds them? We can find the answer in the principle of resonance, if the frequency patterns of the transmitter and receiver resonate exactly with one another or if they are coordinated. If the cell receiving system resonate with the incoming information, then it can trigger the whole cascade of biochemical metabolic processes. This is the purest form of bioresonance [1].

There were also published studies that support the proposal that microorganisms also can communicate between each other. Experiments with the bacterial strains of *Bacillus carbophilus* Kasumi were published by Japanese research team. These bacteria need carbon for their survival and so the researchers put carbon only on one half of the cultivation medium. The second half of the medium remained without carbon but despite of this fact, the bacteria to the surprise of the scientists, survived on both its halves. This was the same also if the two halves were separated by a plastic wall or glass. The authors came to the conclusion that the survival of the bacteria without carbon was possible only due to the transfer of life needed information through physical means from one bacterial colony to the other [4].

In the living organism, the DNA, but also the cell membranes play an important role in the electromagnetic transfer of information. The proof, that the oscillatory information of cell membranes is responsible for the regulation of the whole biochemistry of a cell lies in the work of Nelson and Henkart, who demonstrated that the mesenchymal cells respond to the external stimuli with a dramatic increase of the cell membrane potential. Oscillations in membrane potential are transferable from cell to cell. Within a cell, they cause the increase of the concentration of ions of potassium. This subsequently regulates the function and structure of the cytoskeleton, which generates the shape of the cell. The shape of the cell is closely related with the metabolic processes in the cell itself [5].

The scientists from the university at Marburg demonstrated a key significance of the natural oscillations on all every cell membrane systems. With the enter of protons through the cell membrane, the parts of the membrane enzyme ATPase starts to rotate. The consequence of the fact that this molecule projects partly also to cytoplasm, the cytoplasm starts to rotate accordingly. The result is the

creation of a biological oscillatory system and through the flow of protons, the electromagnetic field starts to be created. This is an example of how the living organisms may create the bioelectrical fields [6].

There is an increasing amount of evidence that the electromagnetic oscillatory information play an important role in the cell metabolism and also in the cell communication. Some scientists point to the fact that except the electrochemical oscillations, there exist also other oscillatory information, which weren't up to this day fully explored and may play an additional role.

These scientific results became the basis for the explanatory models of the physical oscillatory therapies as homeopathy and bioresonance. If it is possible to influence a particular oscillatory field through the appropriate impulses, then we can with the same way also modify the biochemical processes within the organism [1].

Preclinical studies with the bioresonance therapy

There were realized several preclinical experiments with the bioresonance devices for the purpose of confirmation of its effects.

In 1995, at the academy in Kiev, the scientists transferred an information through a bioresonance therapeutic device from a mix of human serum albumin from 10 healthy women into the preparations with the serum albumins from 8 patients with a breast cancer, which components subsequently started to improve. From this experiment we can assume, that the bioresonance therapy may have a regulatory effect on the immune system [7].

In 1997 the scientists from Ljubljana conducted an experiment in which, through the bioresonance device, they applied an information from a solution of the acetic acid into a neutral mineral solution, which subsequently started to exhibit physical changes and gradually started to become an acid - its pH slightly but significantly decreased [8].

In another experiment, the cell cultures of cancer cells - degenerated monocytes from human lymphoma, were exposed to bioresonance treatment (further BRT). After 3 days the DNA synthesis and the contents of DNA in cells increased by 20% [9].

In the year 1999, there were published results from a controlled study of scientists from the Institute for experimental pathology, oncology and radiobiology of the National academy of sciences of Ukraine. They tried to modify the phagocyte activity of human polymorfonuclear leukocytes in in vitro conditions, through the effect of several bioresonance therapeutic regimes. The average amount of phagocytes in the non-treated control group was 21,1; in the group with one amplification of the therapeutic signals it increased to 54,7 and in a group with the amplification 12 it increased up to 41,7. A slightly lesser results were obtained with an inverted therapeutic regime (27 in amplification of 1 and 31,12 in amplification of 12) [10].

Some experiments were conducted also on animals. For example, the researchers from Vienna, explored the vitality of heat-damaged fly *Drosophila* larvae and her benefit from BRT. They found that the vitality after the therapy increased to the contrary to the control group, the answer to the light signals was normalized and the survival rate without nourishment also prolonged [11].

Another double-blind trial was conducted by two independent institutions in Austria and Italy. It also proves that the biophysical information transfer is possible. The experimenters observed the transformation of tadpoles into frogs. This process is slowed down by adding of thyroxine into the aquarium water. But the same effect was also achieved by application of information from thyroxine solely through the bioresonance device [12].

Dr. Sakharov conducted and published a controlled preclinical study with mice, contaminated with radioactivity of Chernobyl type. After the BRT the mice achieved a statistically significant improvement in observed immunological parameters (the amount of Ly in thymus and in spleen) and their correction [13].

Clinical studies with bioresonance therapy

Pediatrician Dr. Schumacher conducted one-group cohort study with 204 children with different types of allergic diseases. After 5-11 months after BRT, 83% of patients reported, that they are without symptoms of allergic disease, in 11% the symptoms were improved, 4,5% remained without change and in 1,5% of the cases couldn't be processed [14].

Afterwards, the same author published one more study, in which he observed patients with pollinosis. In the season following after the BRT, 43,4% of patients were without symptoms and in 50,4% there was an improvement of symptoms [15].

Dr. Hennecke also analyzed patients with allergic diseases. He conducted one-group cohort study with child and also adult patients with different types of allergic diseases (neurodermatitis, eczema, pollinosis, allergic disease of an eye, respiratory and digestive tract). These were patients with long lasting history of an allergic disease who has already undergone a therapy of a very little effect. In the observed time period they were strictly avoiding the contact with the allergens. From 200 analyzed patients, 50,4% stated that they are without symptoms, 34,1% reported improvement in their symptoms and 15,5% were without improvements in their symptoms [16].

Several observations were realized also in China. In 2005, there was published a study, in which 79 patients with allergic skin disease undergone the BRT. There was also achieved a great effectivity- 74,7% patients were without symptoms after this treatment, 22,8% patients were with improvements in their symptoms. The observation and evaluation of these patients was done one year after the BRT [17].

In the same year the Chinese authors repeatedly published 60,8% and 66,7% efficacy after BRT in chronic urticarial, in terms of children from 1 to 15 years it was actually even 90%. The interesting thing was, that with the increase of the age the recorded efficacy of the treatment went down [18] [19].

In another randomized controlled prospective study with parallel groups of patients with pollinosis and allergic bronchial asthma, the patients were divided into 3 groups. The ones who were treated solely with bioresonance achieved the highest efficacy rate- 85,6%, patients who were treated by bioresonance after a previous medication treatment achieved efficacy of 79,6% and a group of patients treated solely with medication treatment- 69,1% [20].

An extensive observing study was conducted at a pediatric department of the central hospital in China. There were observed 1639 patients with different allergic diseases and with the history of previous not much effective medicament treatment. The patients were observed 6 months after BRT. The presented average success in the individual types of diseases was around 83% (maximum in eczema, minimum in neurodermatitis- 70%) [21].

At this department, there was conducted also another one-group cohort study, in which the researchers observed the course of diseases as eczema, bronchial asthma, allergic conjunctivitis and rhinitis in 154 allergic patients in the time period of 6 months after the BRT. Immediately before and during the therapy, no drugs were given. After the treatment there were 120 out of 154 patients (78%) in the time period of 6 months, totally without symptoms. [22].

The effectivity of bioresonance therapy was presented also in other diseases not only in the allergic ones. The high degree of statistical significance in this treatment was supported by a prospective randomized two-armed study, in which there were included 2 groups of 14 patients in each group, with a damage of liver and with a history of this damage of a minimum of 1 year. In the group treated with bioresonance, there was observed an improvement or a total normalization of values of liver enzymes within serum. The differences between groups were evaluated as statistically significant [23].

There were published also 2 studies with patients suffering with rheumatic arthritis. In the first one, there were studied the antioxidant enzymes in lymphocytes. After added BRT, the peroxidismuthase and glutathionperoxidase activity went to normal and the clinical state improved. The authors of this study assumed from the results, that the BRT may activate non-specific protective mechanisms in patients with rheumatoid arthritis and reduce the inflammatory answer [24].

In the other study, the authors studied the synthesis of heat shock protein-HSP, which is in patients with rheumatoid arthritis reduced to 60%. Due to the bioresonance treatment, these values normalized. The authors, based on these results, evaluated BRT as a perspective method for the treatment of patients with rheumatoid arthritis, which may contribute to existing therapeutic approaches. They reflect, if HSP serves as a primary target for the low frequency

electromagnetic oscillations or if the BRT activates the genome of immune cells including HSP genes through the regulation of other components of the cell activation (antioxidant effect, cytokines and others) [25].

In another clinical study with BRT, the patients with fibromyalgia, who were treated physiotherapeutically and by a point massage were also included. One group of mentioned patients in addition underwent also a bioresonance treatment. In both groups of patients, there was observed an improvement of the clinical state but the effect of the treatment in the group of patients after BRT was achieved sooner, was evaluated as stronger and also with a longer-lasting effect to the contrary to patients from the control group. The muscle pain was improved by 72%, in the control group without the BRT it was only by 37% [26].

Similar results were achieved also in a clinical study with patients suffering with gonarthrosis. The symptoms of pain were also eased but in patients who underwent also the BRT it was sooner and for a longer time period. The effectivity of the treatment was evaluated on the basis of several criteria - joint pain, joint function, blood analysis, the ability to work and a subjective well-being. In the bioresonance group was the effectivity 94% to the contrary to the control group where it was solely 32,5% [27].

In a placebo controlled study, the symptoms eased by 48,2% in patients with functional disorders of the gastrointestinal tract. In a group of patients with the placebo treatment the improvement was only by 3,8% [28].

Another study was conducted by the researchers of Institute of medical rehabilitation in Maribor. It was done with the top athletes with the syndromes of overload. The experimental group of patients was treated just with BRT, the control group of athletes just with conventional methods - ultrasound, stimulation current, cryotherapy and antirheumatic drugs. The efficacy in both groups was the same but the time to achieve it was shorter in the experimental group. In this group it was also necessary less therapeutic sessions [29].

Summary

From all above it is obvious that nowadays there are available numerous studies from different medical departments, which were conducted with accordance with the scientific criteria and which in its conclusions declare the effectivity of bioresonance method of treatment. More and more practitioners from different backgrounds refer about the success of this treatment - interestingly recently also the practitioners from veterinary medicine.

The practical experiences in the acupuncture practice

In my acupuncture practice I also started to use the bioresonance device-BICOM Optima. In Slovak republic, this device is registered in the State's

Institute for the Control of Medicines as a diagnostic and therapeutic device, which works on the principles of resonance. In patients who show interest, I supplement and extend the acupuncture examination by the bioresonance diagnostics and therapy. But there are also others, who mostly based on their anxiety from the application of acupuncture needles, require only the BRT. In this case I also perform the acupuncture examination (pulse diagnostics, diagnostics from the tongue, EAV, TST). After nearly one year's experiences, I can say, that after BRT, the clinical state of patients is despite of chronic nature of their problems in most cases markedly improved and I haven't observed incidence of any side effects of the treatment. Sometimes, several hours after the first BRT, there occurred a mild fatigue namely in the chronically ill, mainly older patients, who didn't follow the recommended drinking regime. The most obvious results of this treatment were observed in the painful states (LIS, koxarthrosis, gonarthrosis) in allergic diseases, in disorders of the liver function, pancreas and in the deleting of so called "active scars".

Conclusion

Based on my experiences I consider the bioresonance diagnostics and treatment as an appropriate extension and supplementary to the acupuncture diagnostics and treatment. It is of a benefit for a patient, off course when provided after a thorough analysis of all findings together with findings of the conventional medicine and with an elaboration of suitable therapeutic plan, in which the character of the disease, clinical state and also the age of a patient must be taken into account.

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