A Pluri-Disciplinary Therapeutical Approach Of The Central Nervous System Patology - Foundations For Economic Effectiveness

Dr. Angel Iulian Popescu
Life Style, Education and Health Association
contact: angel.iulian.popescu@gmx.com

Abstract

Etiological complexity of neuro-psychiatric disorders both in terms of pathology and in terms of therapeutics, is given by the very multi-layered structure of the human psycho-emotional functions and the possible causal interaction between the anatomical and physiological structures (i.e. the disorder mechanisms of these structures) and its psycho-behavioral ramifications.

Keywords: Central nervous system, neuro-sciences, alternative therapies, psychosomatic medicine, kinesiology

Reconsidering the functional behavior of the nervous system, we note that “the separation of sensory nervous system functions, into motor and mental ones is artificial and schematic. In reality there is no sensory activity without motor manifestations and vice versa, and the mental states result from the integration of the first two. The whole nervous system activity takes place in a unity in its extraordinary diversity”\(^1\).

\(^1\)Personal translation from the Romanian original, „separarea funcțiilor sistemului nervos în funcții senzitive, motorii și psihice este artificială și schematică. În realitate nu există activitate senzitivă fără manifestări motorii și viceversa iar..."
From the above mentioned aspects we can deduce practical consequences with direct application on one hand, in the conservation and the optimization of the psycho-physical health, and, on the other hand, in the therapeutic intervention possessing a double destination - (1) cases of psychosomaticness and (2) cases of somato-psyching (Angel Iulian Popescu, Alexandru Paul, Omnivalent therapeutical approach of the patient²).

In terms of clinical practice, we can highlight two types of approaches. The first finds it source into the millennial experience of judicious observation realised on the entire causative chain of a disorder - Chinese Medical School (Daniel Reid, The Complete Book of Chinese Health and Healing, Shambhala, 1994). Also in this context stands with necessity the causal link between a psycho-neuro-physiological disorder, extensive degeneration and use processes of certain anatomical structures, lifestyle and acquired personal or family history of the patient. From the above mentioned aspects it results that, on medium and long term, in terms of efficiency and costs involved in the treatment of systemic disorders, the increasing of the patient awareness is a key factor.

The second approach ulterior in terms of historical chronology, belongs to Western medicine and is essentially founded on the continuous deepening of the knowledge of the anatomical and physiological structures involved into the proper functioning of the body. In the perspective of improving the analysis of complex interactions realised at the chemical, biochemical and physiological levels, therapeutic systems have been developed aimed both to resolving the immediate practical problems, and to reharmonize the physiological mechanisms through medication and dietary recommendations. The introduction of certain drugs is aimed to normalize, activate, increase or decrease certain functions of the body, physiological mechanisms, in a particularized way and by certain segments. In terms of practical urgency, the direct action on the body can generally be achieved by surgical (surgery, gypsum, etc.), kinesiological (recovery of sections, functions, etc.) and metabolic (infusion, hydration, diet, etc.) approaches.

To the second approach it corresponds the principles of respecting the rules of assembly functioning but by focusing on quick partial solutions with immediate results that cannot be consolidated on medium and long term. To achieve a consolidation however, is appropriate to involve changes in the whole (e.g. the treatment with vaso-dilatation of the narrowed arterial sections requires also a change of the nutrition style to facilitate the process of optimal pressure recovery - a process that

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involves the releasing and the eliminating of the thickening of blood vessels, the restoring of their flexibility by the introduction into the body of active substances involved in removing the made deposits).

From the mentioned aspects it results that both in the recovery process and in that of conservation of the optimum state, there are two problematic levels that have to be respected: (1) the daily routine, (2) the functional and constant maintenance of all essential physiological processes involved both (a) in the automatic operating body, and (b) in the cyclical recovery of body cells (during periods of 7 years) whose continuity must be maintained constant throughout life.

The decreasing and blocking of any parts of this regenerative cycle leads to the apparition of gradual degenerative multi-level processes that cannot be stopped by allopathic means. The essence of preserving the individual psycho-physical health resides in maintaining to an optimal level both the macro and micro mechanisms that are essential for life – the parallelism between the breathing of lung/breathing of cell, macro-nutrition in the digestive tract/micro-nutrition in the anabolic processes at cellular level, defecation in the digestive tract/catabolic processes at the cellular level, body level of exercise/mechanical work in muscle/innervation, contraction in cellular and tissue level of the body movement/inner secretion of the joint.

Given the complexity of the mechanisms, we can deduce the major role that the procedures of somatic massage, lymphatic drainage, program resetting and balancing the internal functioning of organs by reflexology (both vertebral and plantar) stimulation, medical gymnastics and physiotherapy can play in approaching any type of pathology. To the above mentioned aspects, you can also add the use of modern technology to stimulate the entire nervous chain.

A very important element to remember is that of coordinating the multi-level approach to existing structures and processes in the body that has the role to preserve and improve a good condition and to provide real support for slowing down the degeneration processes and for supporting the optimum processes into the specific limits of each structure (cell, tissue) – the destroyed neurons cannot be presently regenerated, the death of a brain neuron being followed by its dismantling and be its replacing by glial cell; a new neuron to replace it cannot be presently produced at the current level of knowledge, but the improvement of the trophic capacity of glial cells will necessarily increase the working capacity of the left neurons; this is realised on multiple levels: at the macro-molecular level it is the result of improving and increasing the arterial blood flow, increase of multiple of $n$ as a particular, indirect effect of the physical exercise accompanied by the quality increase of nutrition at the cellular level – aspect which is the result of the coordination between the
physical effort and the quality of the food intake entering into the digestive system from where they will be taken and processed in order to reach at the cellular level; the coordination of nutrition with the appropriate physical exercise, with the mental exercise through various training methods of logic and image projection will not only improve and optimize the metabolic functioning of brain neurons, but also it will increase the number of spines of a certain neuron, growth that will cause a qualitative jump of processing order by the increasing of the number of connections between the same neurons, fact that will replace in an effective way the destruction of some of them. With this occasion, we must distinguish between the neurons involved in intellectual processes, those involved in the motor processes and those involved in psycho-emotional processes, all of these being voluntary processes conducted into the cortical structure, but carried out in different areas according to Brodmann and Voght cyto-architectonics (creative processes being related to the 10th area of the frontal lobes correlated with the areas 39 and 40 of the temporal lobes).

Depending on the location of the stroke (CVA), aspect detected by monitoring the troubles specific to each area (centers of speech, hearing, motility, etc.), we shall detect the injured area of the cortical brain. The recovery of the affected functions through new neural connections by kinesiologic and physiotherapeutic means, enjoys many benefits by the use above correlations.

According to the multi-millennial experience of Chinese Medical School, 90% of psychosomatic and vegetative disorders are initiated and supported by both the malnourishing and undernourishing of the entire nervous system, whether we speak of the central nervous system (CNS) or peripheral nervous system (PNS).

Malnourishing is produced by the presence into the food consumption of the person of unfit nutrients, with harmful effects on the body and by the disruption of fundamental metabolic processes at the cellular level and of digestive processes at the organ level (at the cellular level by the presence of free hazardous radicals, of toxic substances or of replacing artificial substances – made by chemical synthesis which, although they have the same molecular formula with the original one necessary to the organism, are not recognized by the organism due to variations in the electronic structure of the chain position; by their exaggerated presence into the body and by their long time retention lacking the right on time elimination of them – ammonia, acetone, acrolein, bad cholesterol increasing substances, alcohol, tobacco, different medical drugs, drugs of risk, etc.).

This process of malnourishing has also a more complex component, that of processing into the body, by aerobic or anaerobic way, of certain toxic products (such as chlorine vapors taken from the steam of the shower water, methyl-parabens parabens from cosmetics which proved to be the cause
of many breast cancers, fluoridation of the drinking water, pesticides present into the food of vegetable origin, the antibiotics and the synthetic hormones present into meat, the synthetic hormones from the birth control pills, more than 600 psycho and neurotropic substances present in the breathing air and the list can go on).

Poor nutrition takes into consideration both the insufficient presence of essential nutrients into daily nutrition and also their improper dosage (proteins, carbohydrates, lipids, minerals, vitamins, enzymes, water, oxygen) depending on the biological period in which the human individual is (childhood, adolescence, adulthood, old age) and on the type of specific realised activity (intellectual, physical one, etc.). One of the fundamental aspects regarding the poor nutrition is represented by the systematically omitted calculation of the individual minimal amount of food intake providing the minimum energy for maintaining the vital functions - about 10% of all energy produced by the ingested nutrients are consumed for digestion; this process can go up to 40% if we are talking about the digestion of complex food as pork.

One of the main causes that has to be considered as source of the initialization and progression of the degeneration process of the human body (which is essentially a cell degeneration) is the self-digestion (auto-digestion) process that is triggered into the body simultaneously by malnutrition and poor nutrition. The process itself is the way through which human biological organism understands to conserve its vital functions indefinitely until the complete depletion of all the categories of substances essential for its proper functioning (muscle and liver glycogen, lipid reserve areas, aspects continued by the take-over of skeletal muscle proteins, calcium and magnesium from bones, etc.).

The issues listed above play a fundamental role not only in the metabolic and structural health of the human body, but especially in psycho-emotional health of the individual. All matters listed above are vectors that influence all the parameters of individual existence, thinking and working capacities. Now it is the right moment to notice the significant importance of the neuro-somatic and neuro-vegetative approach in treating many problems of individual mental and physical health.

As a framework we can start our investigation from the work of Adrian Restian – *Diagnostical medical/Medical Diagnosis*, Editura Dacia, Cluj, 1988. It is necessary to realise a comprehensive and extensive anamnesis of the patient regarding the entire framework of his existence. Since the nervous system disorders are often produced by complex psychosomatic causes of psychological and social etiology, it is necessary to investigate the psychological history of the individual, to determine the possible interactions between the patient and his family, his work environment, his
lifestyle, his dominant psychological type, the history of health disorders present both on the hereditary bloodline and on the acquired line throughout his life.

From this point of view there is a correlation between the categories of troubles, classes of patients and the possible combinations between them. But the keynote is determined by the definition of personality and by the type of disorder suffered by the patient (psycho-somatic or somatopsychic disorder).

It is the moment to introduce into the therapeutical approach three important notions. The notions of psychosomatic knowledge and education based on the studies and researches of psychosomatic medicine which gathers into an integrative vision all the informations come from inter and transdisciplinary research focused on the human being inner and outer dynamics.

Thus we can efficiently approach many types of mental disorders, particularly depression which “are linked to thinking and false beliefs”3. From my therapeutical experience, the misinterpretation of natural manifestations of the body can generate an entire set of psychological anomalies. Combining the notions of cognitive therapy4 with the psychosomatic teaching applied in the physical training, the medical intervention gains important and active properties. In the same direction, behavioral therapy has to implement the somato-physical obtained results into a changed perspective assimilated and integrated into his ordinary life.

Other items of interest are represented by the principal components of alternative medicine such as acupuncture, chiropractic approach, herbal medicine, homeopathy, Ayurvedic medicine, reflexology, metamorphic technique, vertebral therapy.

From this point of view, it is obvious that the importance accorded to preventive medicine and the focus on the initial hygiene and prophylaxis of the individual lifestyle has to logically and naturally become a priority.

In this paper I am a supporter of the view that the correlation between the therapeutic approaches is a must. It is an option for the “bio-psycho-social «triple paradigm» [...] that does not exclude any of the major ways of understanding the brain pathology and of establishing treatments which simultaneously attack diseases that actually are neither «purely mental» and either phenomena generated by the individual isolated from his peers”. By introducing the practical approach of restoring the normal psycho-neuro-vegetative and psycho-neuro-somatic connections, we try also to

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deepen into our research the “psycho-genetic, organo-genetic or socio-genetic” involvements. We can thus pursue both the realization of a “primary prevention”, of a “cure” and of a “secondary prevention”, that of “relapse prevention”.

On the other hand, we are interested in creating a parallel between the management of cerebral vascular accidents (CVA’s) in which the neurons have been destroyed – an occasion that seeks to restore other cortical nerve connections through the maneuvers performed by the therapist; they represent from the functional point of view, an outside neuron or neural package which induces into the patient’s body, through a reverse, mechanical way, the possibility of creating new cortical connections – and the management of neuro-psychiatric disorders – in which although the neurons and the nervous connections are not generally destroyed, the “resetting” of the first and the strengthening of the latter is necessary.

This aspect has also correlative implications into the bio-psycho-social recovery and/or rehabilitation targeted by the specific psychological and psychiatric treatment. In this context, we have to underline the essential role played by the nature’s energy, by the natural and unpolluted environment which aims to reconnect the interrupted link between nature and the individual who lives into an artificially built society. Another fundamental aspect is the mental presence of the doctor/therapist whose brain releases an important psychic influence over the patient by empathizing with his suffering, teaching the patient to empathize himself with the suffering of others, process capable of dynamizing regenerative mental energies significant both for the patient and for the community of patients with which he interacts.

The physical movement and the diversity of certain activities having complex psycho-neuro-emotional implications are also parts of a comprehensive approach scheme.

Restoring the nervous neuro-vegetative and neuro-somatic balance aims exercise a positive influence on the reverse, targeting cortical disorders, to the “disintegration” of their pathological components. It is noteworthy the fact that all types of stress borne by the patient until the apparition of the nervous troubles concern the correlation between the psychic manifestation, of recording the stress factors in pre and unconscious structures which, by their persistence, transfer the stress from

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the social and psychological level to the neuro-vegetative and neuro-somatic one, becoming thus even the biological and biochemical cause of illness. The stress interposes himself gradually into the cortex activity affecting first the voluntary control and then, gradually, the automated infrastructure of neuro-vegetative and biochemical control mechanisms (e.g. diabetes on nervous background favored a hereditary etiology, the function disorder of the endocrine pancreas being the final manifestation).

Hence it results the importance of understanding the correlation between the physical activity, the endocrine, immune and the psycho-emotional condition of the patient (see the researches of psycho-neuro-endocrinology and Jean Du Chazaud, Ces glandes qui nous gouvernent, ou, L'immense influence des glandes sur le comportement/These glands that govern us or, The enormous influence of glands on behavior, Equilibres d’aujourd’hui,1990).

In this research we chose to address CNS disorders from the perspective of the integration concept, a concept introduced by C.S. Sherrington (1906) “which first issued the hypothesis that motility exercices a function into the sensory integration. Motility could be considered an intersensory mediator because of the similarity of exploratory activities conducted by different perceptual systems”6.

The concept of integration is that which characterizes the psycho-physiological life of the normal individual both psychically and in neurological, autonomic, musculoskeletal terms. By contrast, we have the concept of trouble (disorder) that is either “the disturbance or abnormality of a function or a morbid physical or mental condition” or it corresponds to “the notion of entropy” as a manifestation of a system disorder, in our case the system being called “person” with all the psychological, physiological and physical components. In this context, the notion of entropy reflects the gradual decline and dissolution of the human living body.

In his turn, the concept of integration is a part of that of anti-entropy referring to the fact that “the living organisms are anti-entropic systems opposing the leveling” and disrupting “tendency” of the “physical environment”, trend expressed by the increasing of entropy.7

The complex and judicious approach of the CNS disorders is a necessity for the biological and psychosocial survival of the human individual.

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From a therapeutic standpoint, in terms of building a particularised approach, we are just quoting the main categories of CNS deficiencies that can cause changes in the functioning of the body – which, at his turn, adversely affects the psychological balance of the individual, one of the elements being represented by the causal relationship established between marrow – Vegetative Nervous System/VNS – marrow – cerebral Cortex: (1) organogenetic troubles, (2) endogenetic troubles, (3) psycho-genetic troubles and (4) socio-genetic troubles (Aurel Romila)⁸. In this context, the therapist must consider the concept of sociogenetic disorder representing a key notion in the initialization and development of the psycho-neuro-vegetative and psycho-neuro-somatic disorders – e.g. the effects of social conflicts of the historical period in which the patient lives, conflicts that are come from its surrounding environment (unemployment, divorce, disorganized family, immorality, conflicts in family and society) and tend to invade the individual psyche. There are a number of manifestations such as “anxiety and somatoform disorders, dissociative disorders, factitious disorders, sexual dysfunctions, paraphilias, gender identity disorders, eating and sleeping disorders, the impulse-control troubles” (including the sexual one), “adaptation and personality disorders”⁹.

It is essential to remember that therapeutic success in these situations is strictly related to the empathy that is established between the therapist and the patient, empathy that is designed to determine a “decoupling” of the peripheral nervous system from the upper and central part (voluntary semi-automated structures), procedure aimed to stop the negative influence of the person’s thoughts (manifested in the cortex), emotional feelings (manifested in the limbic system) on the sensory and motor control centers from the brainstem and to orient his/her thought flow toward self-regulating and balancing activities. All the regulating process is carried out with internal resources and with the active participation of the patient but is guided from outside by the therapist.

By the way of massage, of stimulating reflexology, by improving blood flow to internal organs and bone marrow, we will get a “resetting” of the automatic controls by a simultaneous and interactive regulating of the endocrine system, autonomic nervous system and lymphatic system. Starting from the clinical and practical observation that ultimately all forms of psychic aggression and self-harming have as result the imbalance of the autonomic nervous system imbalance which also provokes poor vascular nutrition followed by a decrease of the vital signs power, we draw the conclusion that the restoring of the blood flow pressure (on arterial, capillary, metacapillary levels) is a necessity and a priority. When the fundamental functions such as cellular respiration, cellular

⁹ibidem, p.376.
nutrition, both as anabolic and catabolic parts, are significantly improved, the human body tends to recover from stress. Starting from this moment we can talk about a solid foundation for gaining a positive psychiatric, psychological and neurological involution of the pathological trouble.

Individual’s ability to manage his existential problems can be improved only by means of a psychosomatic self-knowledge in which the therapist plays a major role.

In conclusion, the complex causal chains involved in the activity of the central nervous system and in its troubles require the presence of a pluri-disciplinary team able to offer a trans-disciplinary approach to the patient taking into consideration what he really is – a complex coherent living of system.

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