

Anti Aging Newsletter issue April 2007-2

Interview with Prof. Dr. Ana Aslan by Dr. Dorin Sarafoleanu (from Bucharest, Romania), part II

Q: Did you notice anything else, besides the local effect?

A: To my great surprise, I saw, as a result of the procaine treatment, beside the local effect, a general good affect on the physical and psychical condition of the elderly who were undergoing treatment, as well. Specifically, a regenerative sign was exhibited by a 92 year-old lady, who started to grow, on her all-white head, a strip of black hair.

This was a sign which had been awaited by Gh. Marinescu, a scholar, who had applied a rejuvenating method originating in Austria, to patients. As a student in his clinic, years earlier, my duty was to look daily for this sign. Now, I had achieved this highly dramatic moment: obtaining a biologic fact which would have been highly important to and welcomed by Gh. Marinescu, himself.

Then I became sure of what I had only suspected: that procaine was no longer a hypothetical drug. Procaine had an effect on the whole body.

On January 22, 1952, the Romanian government approved the establishment of the National Institute of Geriatrics and Gerontology, of which I have been director from the very beginning. The scientific research started right away. I believe that the existing positive results helped establish this first institute of geriatrics in the world.

Employing procaine in the treatment of rheumatism, and researching the existing literature on the possible use of procaine in rheumatism, I found another interesting thing: if one misses the artery and reaches the vein with an alkaline solution, a necrosis might occur. I got scared. I called my friends, Ion and Elena Polovrageanu and told them I wanted a solution of acid procaine. I asked what kinds of acids could be used and they recommended some.

As I used this substance in the treatment of rheumatism, and as I read that rheumatism could also be cured with injections of benzoic acid, I asked them to combine procaine with benzoic acid. That is how Gerovital H3 was born.

Later it was shown that this particular solution, the benzoic acid with metabisulfite of potassium as a stabilizer, makes procaine last longer in the body, preventing immediate hydrolysis and decomposition in the ingredients: the para-aminobenzoic acid (as vitamin H') and the diethylamidetanol which is claimed to be a precursory vitamin of coline and acetylcoline.

Considering that procaine is an active substance, and that the other two substances that hydrolyze are also active, it appeared to follow that the longer they stayed in the body, the greater the effect. This assumption proved to be correct.

Based on research made on micro-organisms, where I could prove that procaine stimulates their growth in vitro, I asserted from the beginning that it had a vitaminic-type of action.

I had already been proven that with microorganism, the stimulation of their growth could be obtained by replacing the para-aminobenzoic acid (APAB) with procaine. I was lucky to be able to ask the discoverer of APAB (vitamin H') Professor Robert Kuhn, who had won a Nobel prize for this discovery, and whom I met at the Max Plank Institute in Heidelberg, if I could state that procaine had an action of the vitaminic type. His answer was that it was "highly possible."

In 1956, I indicated that treatment should be done by intra-muscular injections: slowly injecting a

solution of 2% procaine in 5cc vials, with an acidity ranging from 3 to 4. The secret of the formula was kept by me and Elena Polovrageanu for eight years. The product was not licensed, but received a name and a trademark: Gerovital H3. Before its industrial preparation, the drug was made at the Medical-Pharmaceutic Institute, then at the Institute of Geriatrics by Elena Polovrageanu.

In the Gerovital H3, the H3 stands for a symbol of its vitamin-type action. The experiments at the Institute started on May 5, 1951. The drug went into industrial production in 1959, using the research from the Institute of Geriatrics, specially founded for the treatment of aging over long periods of time. The patients residing at the Institute, for the remainder of their lives, age 60 plus, benefited from daily medical check-ups. Along with these patients, outpatients were also monitored for the purpose of this study. The outpatient clinic of the Institute was under pressure from scores of patients who demanded consultation, drugs and treatment. At about the same time, the drug was sent abroad for special cases. Before the Ministry of Health passed it, the drug was tested on 7,600 people, of whom 800 were on a preventative course of treatment. All this time the treatment was optional.

One of the people receiving experimental treatment was Mr. Bremme of Paris, who is now 93 and confirms that he is in a perfect state of health: Louis Nagel, an editor, and many others. I then made Gerovital H3 in pill form, a Gerovital cream for aging skin, and shampoo.

Q: Thank you for this briefing on the history of Gerovital H3. Could you now tell us something about the mechanisms of the action of Gerovital on various systems, tissues, the metabolism, etc ?

A: Due to its vitaminic-type of action, the drug I invented was named Gerovital H3, with the para-aminobenzoic acid as vitamin H'. The action of procaine as a vasodilator, anti-inflammatory, and anti-histaminic had already been known. The medical literature mentioned that procaine acts a little upon the central nervous system. Together with Professor C.I. Parhon, I proved the action of procaine on the central nervous system, and as a result, on the activity of the whole body, including the psychic functions.

The research on the action of procaine at the cellular level shows that procaine positively influences both the cellular metabolism and the balance of the cellular membrane. It improves the absorptive process of the potassium ion; helps breathing; influences the balance of carbon hydrates; the balance of nitrogen becomes positive, correcting disproteinemia. The action at the level of the cellular metabolism is anabolic _ it acts on the endocrine systems, balancing the function of the thyroid gland and the sexual function. It also acts on the hypothalamus-hypophyse-superrenal axis, positively influencing the neuro-endocrine system.

During the longitudinal studies made at the clinic of the National Institute of Gerontology and Geriatrics for 25 years, it was noted that in 1953 I had heralded the Gerovital H3 therapy as positively influencing both the functions of the body and certain aging diseases: degenerative rheumatism, cerebral and peripheral arteriosclerosis, angina pectoris, arthritis, gastric ulcers, asthma, Parkinson's disease, neuralgia, neuritis, post-hemiplegic disturbances, skin diseases afflicting young and old, alopecia, the prevention of hair whiteness, eczema, psoriasis, scleroderma, vitiligo.

Also influenced are a series of ailments affecting children and young people: post-encephalitic disturbances with children, mental retardation, arrested growth or intellectual development. With adults, improvement was obtained with Alzheimer's disease, senile dementia, multiple sclerosis. The treatment slows down the aging process and helps the regeneration process.

The in-depth study of the body's functions and the aging process, as well as records which were maintained for 25 years on a number of people, show that the Gerovital patients regain their desire to live and their optimism, suffer less from depression strongly improve their memories, increase their physical and intellectual capacities.

Improvements _ to a certain degree_ can be noted in their hearing and smelling. Brittleness (in the bones) specific to the elderly is reduced. The skin's elasticity and appearance improves, the hair starts to grow again, there is a tendency to repigmentation _ fewer liver spots appear on the hands and face, and muscular strength and mobility of the joints increases. The patients' weight and arterial tension stabilize, and wounds, burns and fractures heal rapidly.

I have already mentioned the importance of the action of procaine on the central nervous system, which I confirmed together with Professor C.I. Parhon and Dr. Al. Vrabiescu, and then with other colleagues of mine, by the conditioned reflex method. We were the first to use this method comparatively on young and old, a fact confirmed by German authors, who stated that Romanian scholars were the first to show the action at the level of psychic functions.

Of our experimental stages I would like to mention the research done on 1,800 rats, half treated, half not. Some of them, showing lesions or deficiencies, were sacrificed after several months. Others developed deficiencies much later _ the animals under treatment lived 20% longer than those that were not. These are facts, proving that the drug acts to prevent the process of aging, or to delay it

Q: Does Gerovital limit its results to the prevention of the aging process?

A: It also works on a series of diseases whose frequency increases with age: rheumatism, arthrosis, and circulatory problems, including lesions which induce a lack of circulation. Gerovital's anti-thrombotic action recommends it in cerebral and vascular accidents.

Q: Have others experimented with your drug, too?

A: It is interesting to note that Teiter, a professor of pharmacology, working with it on isolated organs, discovered that it can prolong muscle contraction by 20%. Aslan and Yan showed an increase of 20% in regeneration ability with tissue cultures. We noted a 22.7% increase in the life span of *Drosophila melanogaster*. Gerovital H3 prolonged the life of post-miotic cells by 17% in cultures of monkey kidneys, while delaying their aging process. This represents only a small part of the data collected regarding the action of procaine on aging, but it does help to demonstrate the large range of its application.

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