

REPORT

of clinical trials of high frequency modulated torsion field application to female post-reproductive period organisms for the purpose of its geroprotective and bioadaptive effect evaluation

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Research group, consisting of: S. Winkler, V. Nesterov, A. Schmidt, S. Oliveri, T. Fridman, A. Topaller (leader of the group – Professor S. Winkler), had been performing a research of high frequency modulated right-hand polarized torsion field effect for the purpose of evaluation of its geroprotective and bioadaptive effect to women's organisms during post-menopause period, since 6.02.2016 till 14.04.2017.

To perform this study Institute of Practical Psychophysics together with “Clinic Tech Incorporated” have developed an experimental device “Metatron Z-100” (TU-9442-004-11907401-2005), which allows bringing effect of high-frequency (with 100 GHz field generation rate) torsion field with low-frequency (250 Hz) broad-impulse signal modulation, with chopping step within 1.8 – 8.2 Hz, tuning spacing of signal chopping frequency – 0.02 Hz and pulse ratio from 0.1% to 99%.

Device had an additional feature of influencing organisms with separate right-hand and left-hand polarized field in accordance with “protector-destroyer” principle.

We carried out a study of torsion field effect on 12 women volunteers, forming a main group, aged 51 – 58. Average age of women in this group was 54.8 ± 3.7 .

Control group consisted of six women aged 53-57, whose average age was 55.1 ± 2.8 .

All women signed an informed consent for participation in clinical trials. No complications or side effects were found during studies.

All women of both a main and a control group were in their menopause period, all of them had no menstruations for more than two years. In a main group, 10 women were in a menopause period for 2-5 years and two women were in a menopause period more than 5 years. In a control group, all women were in a menopause period for 2-5 years.

Throughout the experiment (12 months) organisms of women from a main group were subjected to effect of right-hand polarized torsion field, once in a week,

with 10 minutes exposition. No effects were administered to women of a control group.

Statistical processing of acquired data was carried out according to standard methods; reliability of differences was evaluated by Student's criterion.

Study results

1. Evaluation of women's objective condition

In 5-8 months after beginning of torsion field exposure, the first signs of rejuvenation appeared in women of the first group. Subjectively all women noted improved well-being, memory, absence of depressions, decreasing of nervousness, improved sleep. In all women, without exception, we registered increased muscle tone, improved skin elasticity, decreasing of sagginess and smoothing of wrinkles. Majority of women noted enlargement of mammary glands. Nine women also noted improvement of eyesight. Seven women noted complete disappearance of pain sensations along spine and in lumbar area during walking and standing, joints pain, which were registered in them previously. In four women hair loss process, which was noted before, stopped.

2. General blood characteristics.

Analysis of peripheral blood characteristics of women from both main and control groups proved that both groups had similar tendencies of changes within whole period of observation. So, with increasing of hemoglobin level, distinctions between groups were not manifested.

The same tendency was observed in relation to increasing of red blood cells number. However, the increase (Δ) of these values in a main group was 2.3 times higher than in a control group. Color index decreased equally in both groups. Absolute content of leukocytes in peripheral blood decreased as well. At the same time difference between initial and final values of Le content in a main group was reliably higher ($P > 0.5$) than in a control group. Taking into consideration that initial values in both groups were at upper limits of normal values, decreasing of Le content in a main group of woman during experiment, evidenced the optimization of leukocytes quantitative composition.

3. Structure of general adaptive response.

Blood leukocytes qualitative composition, expressed through blood formula by Shilling, is an identification criterion of general non-specific adaptive response of an organism.

Evaluation of adaptive response structure (training – T; quiet activation – QA; strong activation – SA; stress – S) in women from a main and a control groups in initial condition revealed that all studied women were in chronic stress condition.

At the same time, low level of lymphocytes – the main signal criterion of adaptive response, forming on average 45% in a main group, was combined with signs of response intensity (monocytosis higher than 10%, eosinophiles increase up to 5-7%), which evidenced development of stress at very low levels of reactivity.

Structure of initial adaptive response of women from a control group differed in identification of not only stress response, but also in training response related to anti-stress physiological type of responses.

Correlation of various by character types of response may be expressed through coefficient $C(QA/S)$ which makes possible to find out anti-stress potential in groups structure. In a main group $C(QA/S)$ was equal to 0, in a control group it was 1.6, which evidenced better initial position of women in a control group. Besides, according to degree of intensity these adaptive responses could be related to low reactivity levels, at the same time in a main group the most negative (energetically and functionally) very low levels of reactivity prevailed. After exposure to torsion field, identification of adaptive response revealed withdrawal from deep stress response and development of training, quiet and strong activation responses in majority of women. At the same time reactive levels significantly increased (i.e. shift from very low to average and high reactivity levels was observed). Even in the single case of stress retaining, background values of lymphocytes content increased by 15.8%, decreasing of monocytic intensity by 3.6%, which evidenced shift from very low to high reactivity levels. It is important that $C(QA/S)$ from 0 increased to 3.8.

In a control group of women, change of adaptive conditions was also observed: shift from training response into stress or strong active and shift from stress into quiet and strong activation (3 women). Together with improvement of general group structure of responses, which appeared in increasing of $C(QA/S)$ in 3.2 times, retaining of responses intensity signs characterizing low levels of reactivity was marked.

Thus, comparison of acquired data makes possible to single out the following peculiarities of general non-specific adaptive responses development in women at exposure to high-frequency torsion field.

- 1) withdrawal from deep stress condition of very low reactivity levels.
- 2) forming of anti-stress responses of average and high reactivity levels.

The following signs were typical for a control group: shifting of adaptive responses to more active forms, while having the same low levels of reactivity.

4. Endogenous intoxication values.

It is known that endogenous intoxication, being a non-specific syndrome, is typical for various pathologic conditions, including those appeared at ageing of an organism. Evaluation and correction of endogenous intoxication syndrome became very important for verification of rejuvenation processes.

We have studied cell tests of reactivity and intoxication, calculated according to blood leukogram.

Index of leukocytes shift:

$$ILS = (e+b+n)*(m+lph) = 1.94 \pm 0.42 \text{ (norm)}$$

Lymphocytic index of intoxication:

$$LI = lph/n = 0.55 \pm 0.04 \text{ (norm)}$$

Leukocytic index of intoxication according to Kalf-Kalif:

$$LII = (4mc + 3y + 2st + s)*(pl + 1)*(m + lph)*(e + 1) = 0.3/1.6 \text{ (norm)}$$

Where e - eosinophiles, b – basophiles, n – neutrophil (st - stab, s - segmented), m – monocytes, lph - lymphocytes, mc - myelocytes, pl - plasmacytes, y - young.

Analysis of women's reactivity and intoxication test results in observed groups showed the following. In initial condition, total amount of normative intoxication tests in a control group was 1.5 times higher than in a main group. At the same time group difference in frequency of normative tests revealing gradually

increased starting from ILS, then LI and finally LII, which represents the most precise picture of toxic-dystrophic condition of blood cell systems, and indirect value of detoxicating functions of an organism. Therefore, observed level of correspondence in intoxication indices norm in a control group evidenced satisfactory condition of protective functions and their weakening in women from a main group.

After exposure to torsion field the situation changed due to redistribution of normative tests: in women from main group, in all cases normal values of intoxication indices were completely restored: ILS, LI, LII.

In a control group, only one woman retained ILS and LII test normal values, and in one case LII index within normal values. In absolute majority of cases, standards of ILS, LI, LII were breached and their level was decreased by 5 times in comparison with background values. Thus, if we only consider total amount of standard intoxication tests in a main group without discussing of their intra-group distribution, we may note reliable difference with a control group ($P < 0,001$), where quantity of standard values of ILS, LI and LII indices decreased by 3.2 times. It evidenced that without effect of torsion field, natural course of protective-detoxicating processes in organism prevailed, however application of high-frequency torsion field promoted their activization.

5. Torsion field effect to a functional potential of blood neutrophilic granulocytes.

Protective function of neutrophilic granulocytes, as cell factors of non-specific resistance, is widely known (G.E.Brill et al., 1995). Cationic proteins, defined by lysosomal-cationic test (LCT), are the main factor, ensuring functional potential of neutrophils.

In blood preparations, taken from women from main and control groups, colored by green azure A, we defined mean cytochemical coefficient (MCC) in mature neutrophils. In each blood preparation, we processed at least 100 cells and calculated MCC after Astaldi and Verg. Initial values of MCC in both groups are decreased to the same level, which evidences decreasing of cells percentage containing cationic proteins granules. After completion of the experiment in a control group MCC values remained at the initial low level, but in women from a main group, which were subjected to high-frequency torsion field effect, MCC values proved reliable increase of cells with high amount of cationic proteins content ($P < 0,001$).

Observed increase of MCC values by 6.2 times after exposure to torsion field, obviously showed improving of detoxicating resistance as one of the mechanisms of organism resistance improving.

In its turn mobilization of organism's natural resistance cells, manifested in increasing of neutrophiles number with high LCT values after exposure to torsion field, was confirmed and coordinated with reactivity and intoxication cells tests, and increase of its standard values was observed in a main group.

Besides, high-amplitude dynamics of lysosomal-cationic test correlated with significant increasing of reactivity levels by parameters of general adaptation responses, at the same time in a control group reactivity levels remained lower, despite anti-stress character of adaptation response.

In other words, exposure of ageing women to high-frequency torsion field, promoted synchronization of processes, happening at a cell level and integral response of an organism, including multi-system mechanisms.

6. Restoration of reproductive function in women after exposure to torsion field.

All women in both main and control group were in their menopause period, end climacteric stage, when menstruation completely stopped more than two years ago.

In 6-9 months after beginning of the experiment, in six women, subjected to torsion field effect, menstruations reappeared and restoration of duration and sequence of all stages of sexual cycle (follicular, ovulatory and lutein (secretory)) was registered.

In a control group, no significant changes of declining reproductive function in women were registered.

Changing of a hormonal background allowed ascertaining the following:

Before exposure to torsion field effect, in both groups (main and control) we noted physical decrease of estradiol level (21.5 ± 1.09 pmole/l), increased testosterone content (2.5 ± 0.5 mmole/l), increased content of follicle-stimulating hormone (152.75 ± 12 mME/ml) – typical for postclimacteric period.


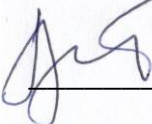
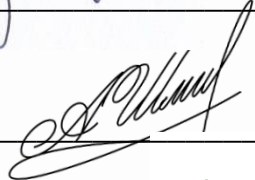

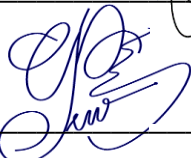

Over the course of female organisms' exposure to torsion field, estradiol level in a main group increased by 4.8 and 9.2 times in 6 and 12 months correspondingly in comparison with the initial levels. Estradiol level in a control group decreased by 2.3 times within the period of study.

Level of follicle-stimulating hormone in women of a main group decreased by 6.2 times in comparison with the initial level, testosterone content decreased by 5.2 times on average. In a control group, these indices have not changed reliably during the study.

Conclusion

By summarizing of acquired data, we may ascertain marked bioadaptive and geroprotective effect of high-frequency modulated right-hand polarized torsion field. Non-specific mechanisms of its effect to female organisms were registered thanks to study of interrelated blood characteristics, including increasing of red blood cells content and decreasing (normalization) of leukocytes general amount, increasing of immunocompetent cells content. Using multi-component cell contents of blood and with help of estimated reactivity and intoxication indices we managed to define reconstruction of protective-detoxicating processes standard values in women after exposure to torsion field.

Surely, endocrine regulation is the oldest form of control, and it is subjected to significant involution during ageing. Due to this fact, complete restoration of hypothalamic-gonadotropic regulation and hormonal status in ageing women after exposure to torsion field, is the most significant result. Therefore, we achieved not only metabolic and visible rejuvenation of women, but also restored childbearing function.

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