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VEGETATIVE ESSENCE OF ACUPUNCTURE THERAPY AS AN ISSUE OF "FUNCTIONAL VEGETOLOGY"

(INFORMATION 13)

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The book is the final edition and has no analogues. Previously unknown functional-vegetative system of human has been discovered on the basis of the ability of biological systems to generate weak currents into artificially created external circuit. Biophysical phenomena testify to the reality of acupunctural channels of the traditional Chinese *Zhenjiu* therapy and its direct relation to vegetative homeostasis… The disclosed theoretical and practical mistakes indicate the necessity of revision of a number of the Eastern and Western theoretical conceptions.
Key words: vegetative homeostasis, Zhen-Tszyu therapy, functional-vegetative system of the person.

На основі здатності біологічних систем генерувати слабкі струми в штучно утворене зовнішнє коло, відкрита невідома раніше функціонально-вегетативна система людини. Біофізичні феномени засвідчили реальність акупунктурних каналів традиційної китайської Чжень-цзю терапії і її безпосереднє відношення до вегетативного гомеостазу… Виявлені теоретичні і практичні помилки указують на необхідність перегляду низки східних і західних теоретичних концепцій.
Ключові слова: вегетативний гомеостаз, Чжень-цзю терапія, функціонально-вегетативна система людини

На основании способности биологических систем генерировать слабые токи во внешний искусственны контур, открыта неизвестная ранее функционально-вегетативная система человека. Биофизические феномены свидетельствуют о реальности акупунктурных каналов Чжень-цзю терапии и её непосредственное отношение к вегетативному гомеостазу… Выявленные теоретические и практические ошибки указывают на необходимость пересмотра ряда восточных и западных теоретических концепций.
Ключевые слова: вегетативний гомеостаз, Чжень-цзю терапия, функционально-вегетативная система человека

Introduction

This chapter is principally up-to-date. It contains the issue of vegetative orientation of the traditional Acupuncture therapy and biophysical parallel between the eastern concept of YIN-YANG syndrome and the Western concept of sympathetic and parasympathetic activity of VNS, which is responsible for vegetative equilibrium (vegetative homeostasis).

The studies of the materialists-organists have shown that sympathetic and parasympathetic divisions of vegetative nervous system are in constant interaction. At the same time the biological function of VNS was divided into:

a) *trophotropic* – oriented at maintenance of dynamic stability of the internal environment of organism, its physicochemical, biochemical, enzymatic, humoral and other constants;

b) ergotropic – oriented at vegetative-metabolic maintenance of various forms of adaptive behavior, mental and physical activity, realization of biological motivations according to the conditions of the external environment, which is constantly changing.

At the same time, it is understood, that VNS performs its functions by the change of vascular tone, adaptive and trophic reactions and functional control over internal organs (which, by the way, is compatible with traditional positions of the ideology of the eastern philosophy).

On the basis of morphological and functional peculiarities VNS was divided into: a) *sympathetic* – that activates the ergotropic function, corrects standard conditions of the internal environment, conditions executive function, inhibits anabolic and activates catabolic processes; b) *parasympathetic* – which is mostly oriented at the maintenance of homeostatic equilibrium (i.e. trophotropic function), stimulates anabolic and inhibits catabolic processes.

The two divisions of VNS are functioning like antagonists, and at the expense of double innervations of the majority of the internal organs, ensure stability of the dynamic equilibrium of the appropriate functions. Unlike parasympathetic, the function of the sympathetic division of VNS depends mostly on central nervous and endocrine systems and processes that occur at the periphery and in visceral sphere. That is why its tone is unstable, needs constant adaptive and compensatory reactions.

Generally, organ VNS provides periodicity of the majority of biochemical and physiological processes, maintaining in the zone of norm the biological constants and adaptation of organism to the conditions of the external environment (the latter is controlled by the double innervations of the majority of internal organs). Similar sympathetic and parasympathetic innervations condition the control and regulation of the processes of excitation and oppression of organs and functional systems, providing stability of dynamic equilibrium of the appropriate functions.

The theoretical basis of the eastern therapeutic philosophy is grounded on the harmony within the organism of two opposite powers (*YIN* – oppression and *YANG* - excitation), that control dynamic-functional stability of the organism. At the same time there is a trace of its direct dependency on cosmophysical factors. Disorder of harmony leads to pathology, which appears in the form of oppression or activation of functional *YIN* and *YANG* activity (by the way, the basis of the pulse diagnostics is the definition of *YIN-YANG* syndromes, in order to recover the disordered functional equilibrium).

This kind of understanding, not taking into account its metaphysical interpretation, may inspire the western scientists to find analogues. It is because the functional equilibrium of an organism, which is achieved with the harmony of two oppositions, should be viewed as a dynamic stability of its internal environment – vegetative homeostasis, which is sustained by sympathetic and parasympathetic divisions of vegetative nervous system. However, the majority keeps on standing on the positions of nervism and reflex theories and sure that vegetative homeostasis is sustained exclusively by the activity of sympathetic and parasympathetic divisions of VNS, somato-visceral integration and neuro-endocrinous correlation.

But there is a question: do the mentioned mechanisms have initial (independent) value, or VNS is simply a functional executive of local individual level? It is known that a range of biophysical and biochemical processes is conditioned by photo-power regulation. Because of the latter, light (as a part of the electromagnetic spectrum) influences the vegetative centers of hypothalamus and hypothesis through optic canal. Decides, it is known today about the biophysical reality of the functional-vegetative system and its cosmophysical dependency!

In other words, for thinking specialists it is a start of "a huge work", which requires reconsideration of theoretical positions of the western therapeutic philosophy that is why we draw attention to the following.

1) Eastern medicine divided functional systems of the human organism into two groups, underlining the integrity and interdependency of internal and external environments.

The first group – functional systems of *YANG* (LI - large intestine, ST – stomach, TE – triple energizer (lymphatic system), SI – small intestine, GB – gall bladder and BL – urinary bladder). They perform executive function, processes of excitation and according to materialistic understanding are analogical with the function of sympathetic nervous system.

The second group – functional systems of *YIN* (LU – lungs, SP – spleen, pancreas, PC – pericardium, HT – heart, LR – liver and KI - kidneys). They ensure the processes of energy accumulation, condition the state of rest (oppression) and according to materialistic understanding are analogical to the function of parasympathetic nervous system.

2) Our elaborated methodology of functional-vegetative diagnostics (FVD) is conditioned by the following principle positions:

- the indexes of functional activity of the representative FAZ YANG and YIN groups, should be assessed from the position of understanding of the functional activity of sympathetic and parasympathetic divisions of VNS;
- sympathetic and parasympathetic divisions of VNS ensure, accordingly, activation and oppression of the functional activity of organs and systems (in ordinary conditions dynamically stable, interdependent, disorder of equilibrium is conditioned by the prevalence of the activity of one of VNS divisions);
- syndromes *YANG - YIN* characterize, accordingly, states of excitation and oppression of organs, reflecting the systemic equilibrium of an organism (in ordinary conditions dynamically stable, disorder of equilibrium is conditioned by the prevalence of this or that process);
- according to the functional purpose organs of *YANG* system are organs of active action, while organs of the system *YIN* – are organs of accumulation (rest);
- dynamically-stable correlation of activity of *YANG* and *YIN* states, which is compatible with dynamically-stable constancy of VNS, state of balance of interdependent activity of its sympathetic and parasympathetic divisions, i.e. vegetative equilibrium;
- prevalence of the YANG syndrome over YIN syndrome testifies to the disorder of vegetative equilibrium with the prevalence of sympathetic activity of VNS;
- prevalence of the YIN syndrome over YANG syndrome testifies to the disorder of vegetative equilibrium with the prevalence of parasympathetic activity of VNS;

3) We included vegetative coefficients (**k**), which were elaborated by us, to the methodology of case-base reasoning. The reflect an interdependent correlation of the total YANG-YIN (sympathetic and parasympathetic) activity, are determined by the formula **k**= ∑YANG : ∑YIN and form the following variants of functional-vegetative diagnosis:

k (to 0,75) syndrome of significant prevalence of parasympathetic activity (**PA-s**);
k (0,76-0,86) syndrome of expressed prevalence of parasympathetic activity (**PA-e**);
k (0,87-0,94) zone of functional compensation of parasympathetic activity (**FcP**);
k (0,95-1,05) zone of vegetative equilibrium (**VE**);
k (1,06-1,13) zone of functional compensation of sympathetic activity (**FcS**);
k (1,14-1,26) syndrome of expressed pre-valence of sympathetic activity (**SA-e**);
k (1,26 and >) syndrome of significant pre-valence of sympathetic activity (**SA-s**).

And now let us try to persuade honorable experts in direct relation of the traditional Chinese *Acupuncture* therapy to vegetative homeostasis and prove functional analogy of the Eastern *YANG-YIN* syndromes and the Western understanding of sympathetic and parasympathetic activity of VNS.

At first, let us observe the dependency of the syndromes *YANG-YIN* on the activity of separate systems…

Taking into account the analogy of the syndrome *YANG* (excitation) with sympathetic activity of VNS, and syndrome *YIN* (oppression) with parasympathetic, we should observe their quantitative dependency on the activity of separate functional systems FS.

1. DEPENDENCY OF YIN-YANG SYNDROMES ON THE ACTIVITY OF YANG-SYSTEMS.

Excitation (to- and higher of the zone of norm) of any of functional systems of the group *YANG* (LI-ST-TE-SI-GB-BL) conditions growth of total activity of *YIN* (fig.1). The received results point to the prevalence of the processes of excitation – sympathetic orientation of the channels of group *YANG*.

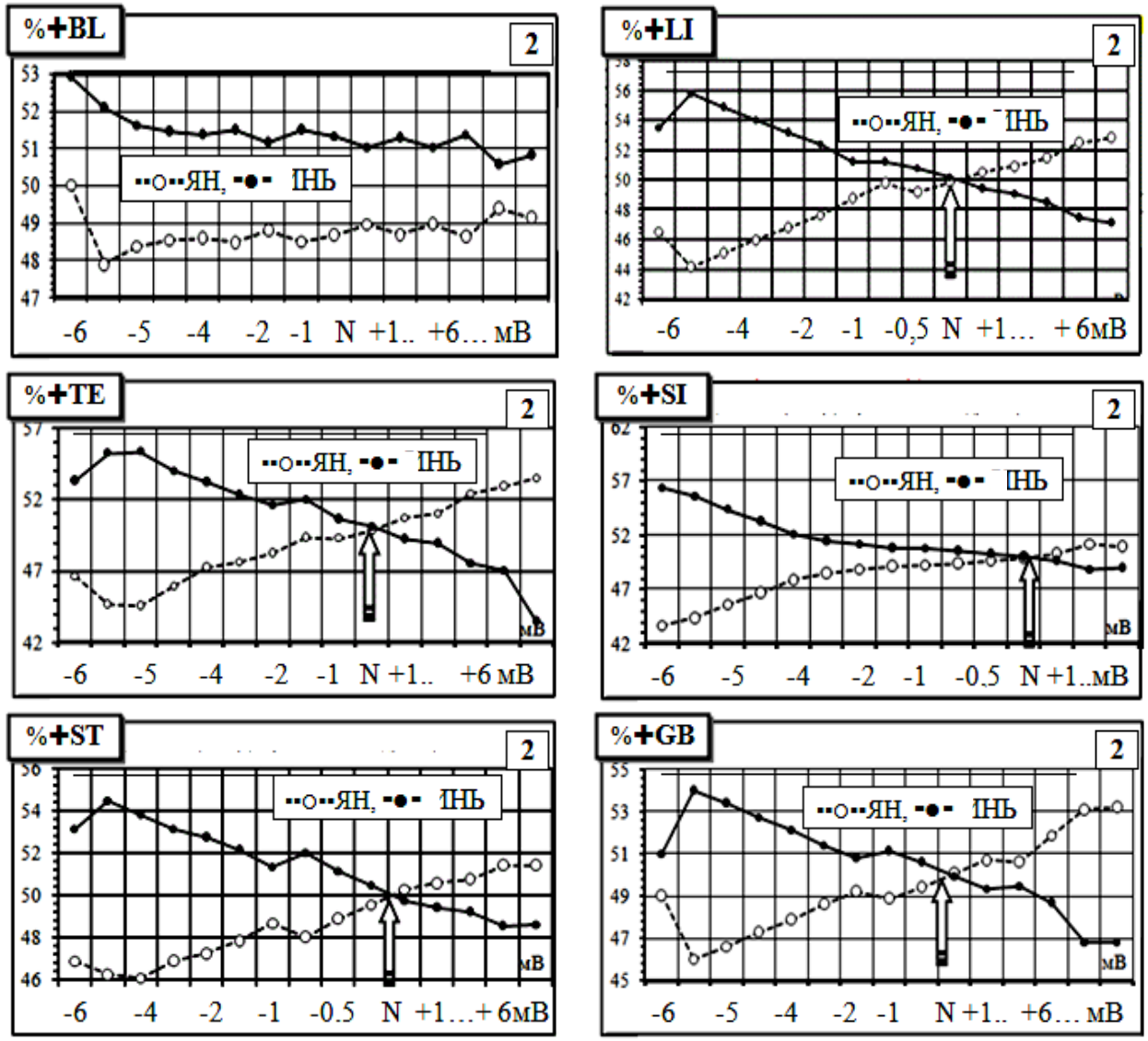


Fig.1 Prevalence of YANG-syndrome during excitation of the channels of YANG-group

DEPENDENCY OF YIN-YANG SYNDROMES ON THE ACTIVITY OF YIN-SYSTEMS

Excitation (to- and higher of the zone of norm) of any of functional systems of the group *YIN* (LU-SP-PC-HT-LR-KI) conditions growth of total activity of *YANG* (fig.2). The received results point to the prevalence of the processes of oppression – parasympathetic orientation of the channels of group *YIN*.

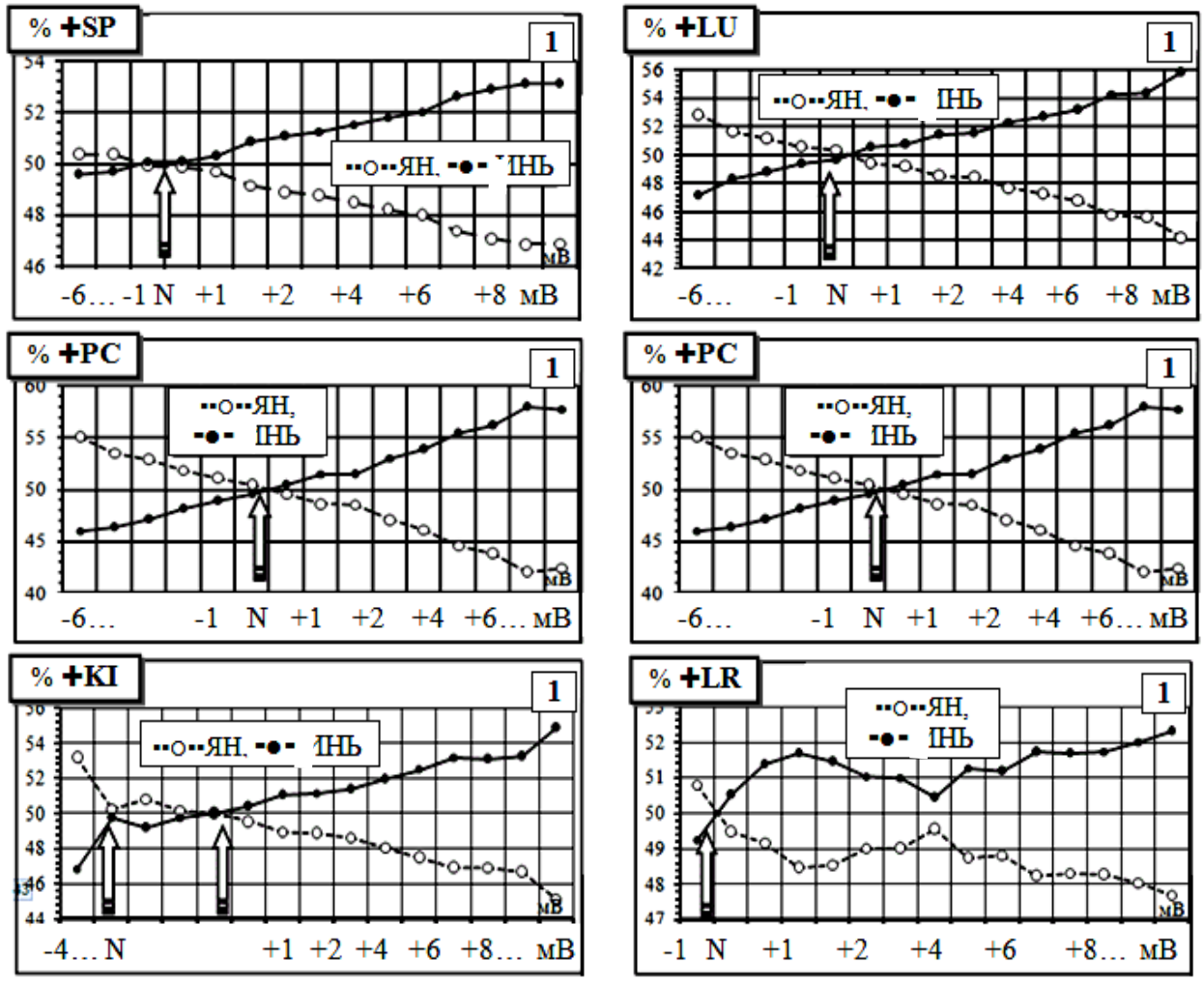


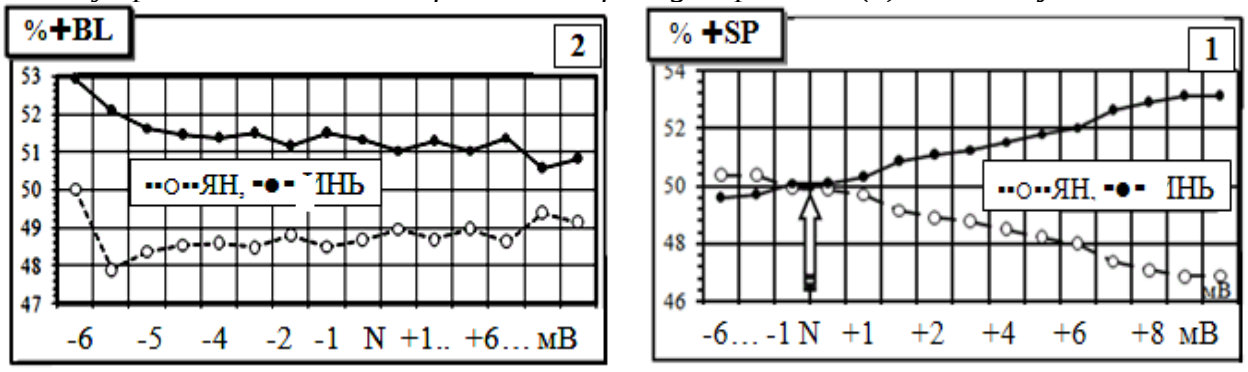
Fig.2 Prevalence of YIN -syndrome during excitation of the channels of YIN - group.

And now let us compare sympathetic (*YANG*) and parasympathetic (*YIN*) activity through separate channels of *YANG-YIN* groups and make the conclusion of the vegetative orientation of the traditional *YANG-YIN* syndromes (fig.3).

It is interesting to note the specificity of *YANG-YIN* activity during excitation of the functional system **BL** (*YANG*) and **LR** (*YIN*). It looks like buffer features are inherent in the mechanisms of sympathetic and parasympathetic regulation of functional equilibrium.

Representative dynamics YANG-YIN activity by groups (fig.3)

*Parasympathetic orientation of channels of the group YIN (1) -**YIN-syndrome.***
*Sympathetic orientation of channels of the group YANG (2) -**YANG-syndrome.***



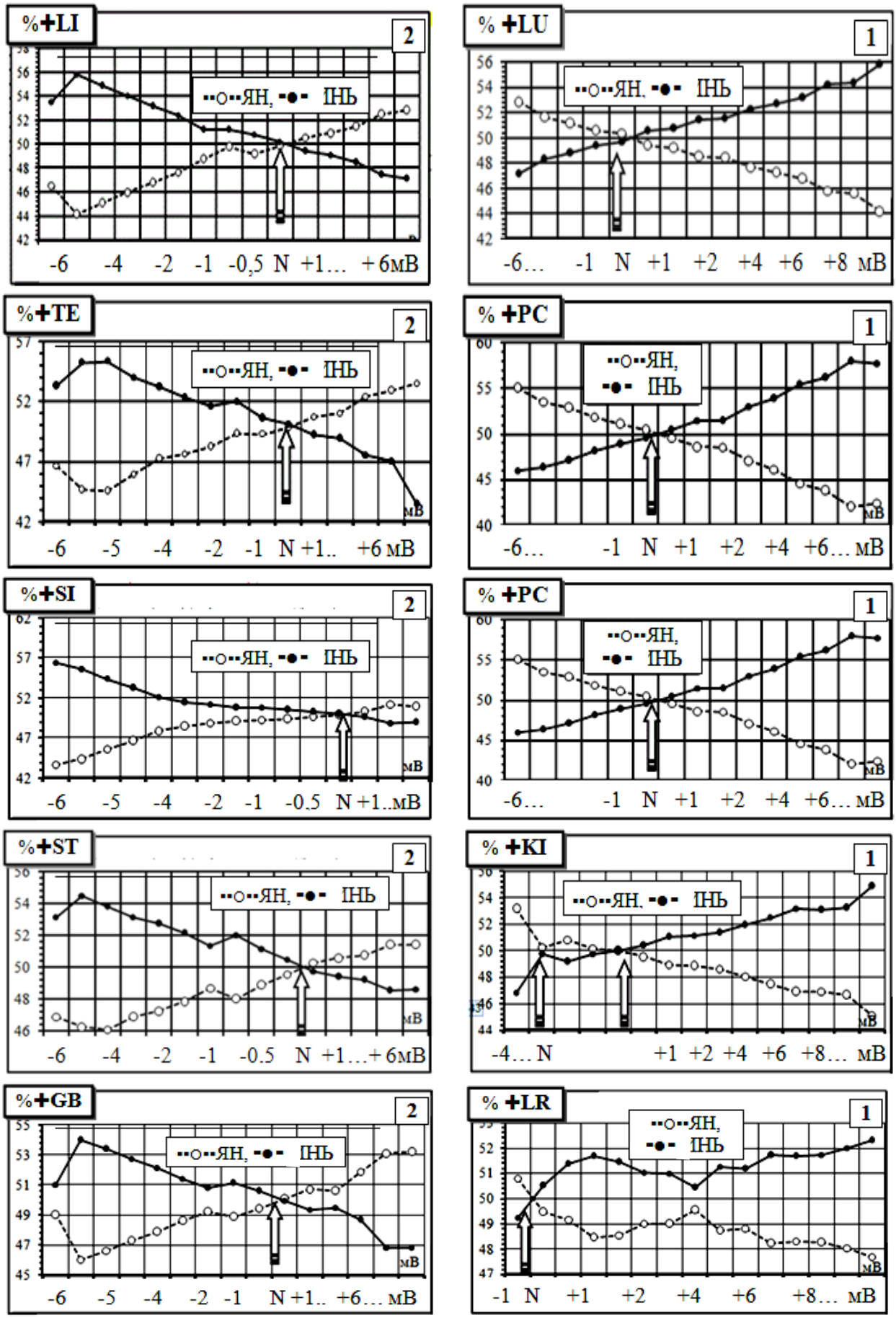


Fig.3 Specification of YANG-YIN syndromes during excitation of separate channels.

Conclusions

1.The increase of activity of separate channels of the YIN group conditions the increase of the number of cases of parasympathetic activity…

2.The increase of activity of separate channels of the YANG group conditions the increase of the number of cases of sympathetic activity…

2. SYSTEMIC DEPENDENCY OF VEGETATIVE COEFFICIENTS

Sympathetic orientation of vegetative coefficients during excitation of the channels of *YANG*-group

Excitation of the channels of *YANG*-group (LI-ST-TE-SI-GB-BL) conditions development of *YANG*-syndrome and is accompanied by the growth of vegetative coefficients **k-VE** (fig.4). The latter points to the disorder of vegetative equilibrium (**VE**) and diagnostic value **k-VE** for the assessment of the levels of sympathetic activity (12.347 observations).

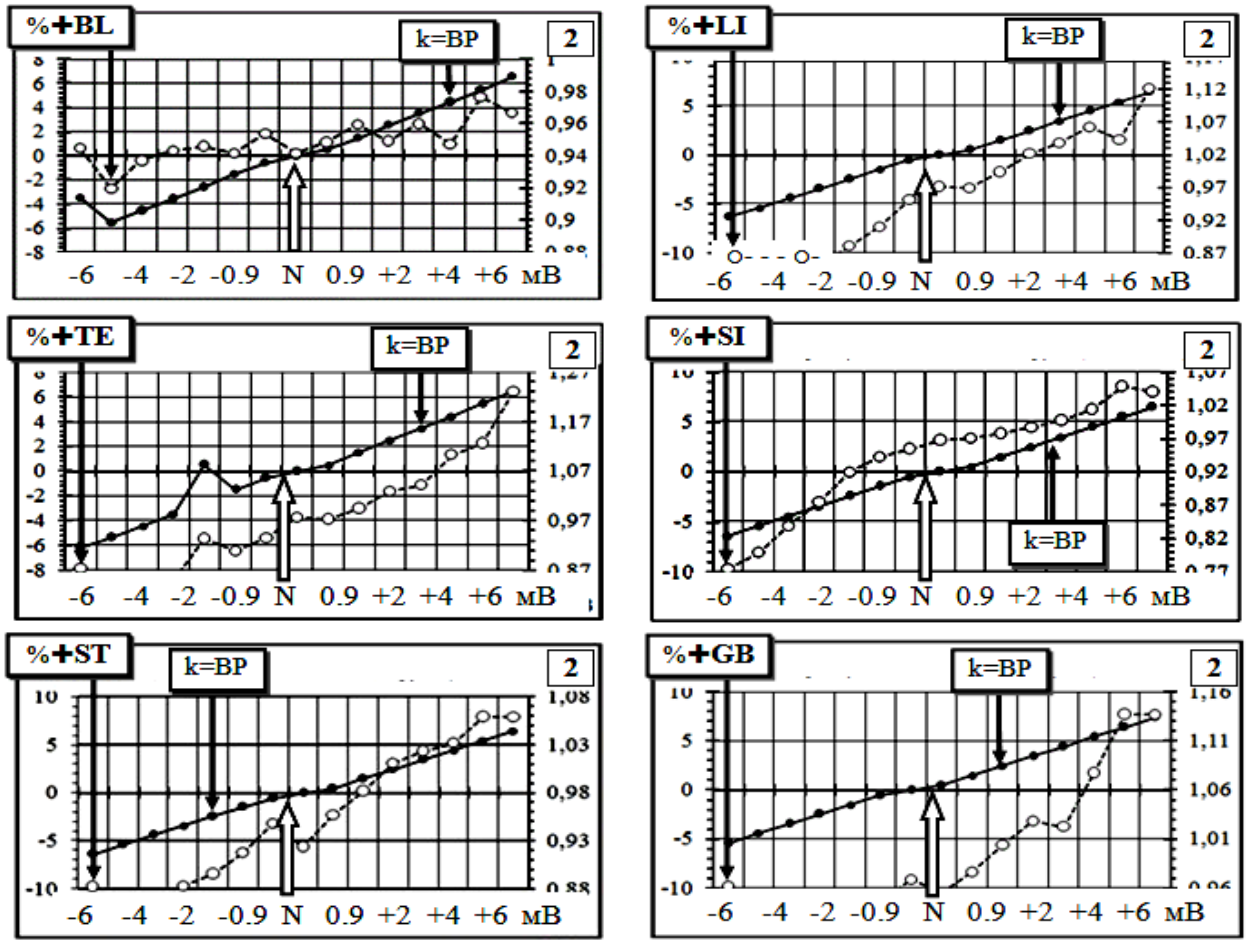


Fig.4 Dynamics of k-VE during excitation of YANG-systems.

Parasympathetic orientation of vegetative coefficients during excitation of the channels of *YIN*-group

Excitation of the channels of the *YIN*-group (LU-SP-PC-HT-LR-KI) conditions development of the *YIN*-syndrome and is accompanied by the growth of vegetative coefficients **k-VE (**fig.5). The latter points to the disorder of vegetative equilibrium (**VE**) and diag-

nostic value **k-VE** for the assessment of the levels of sympathetic activity (12.347 observations).

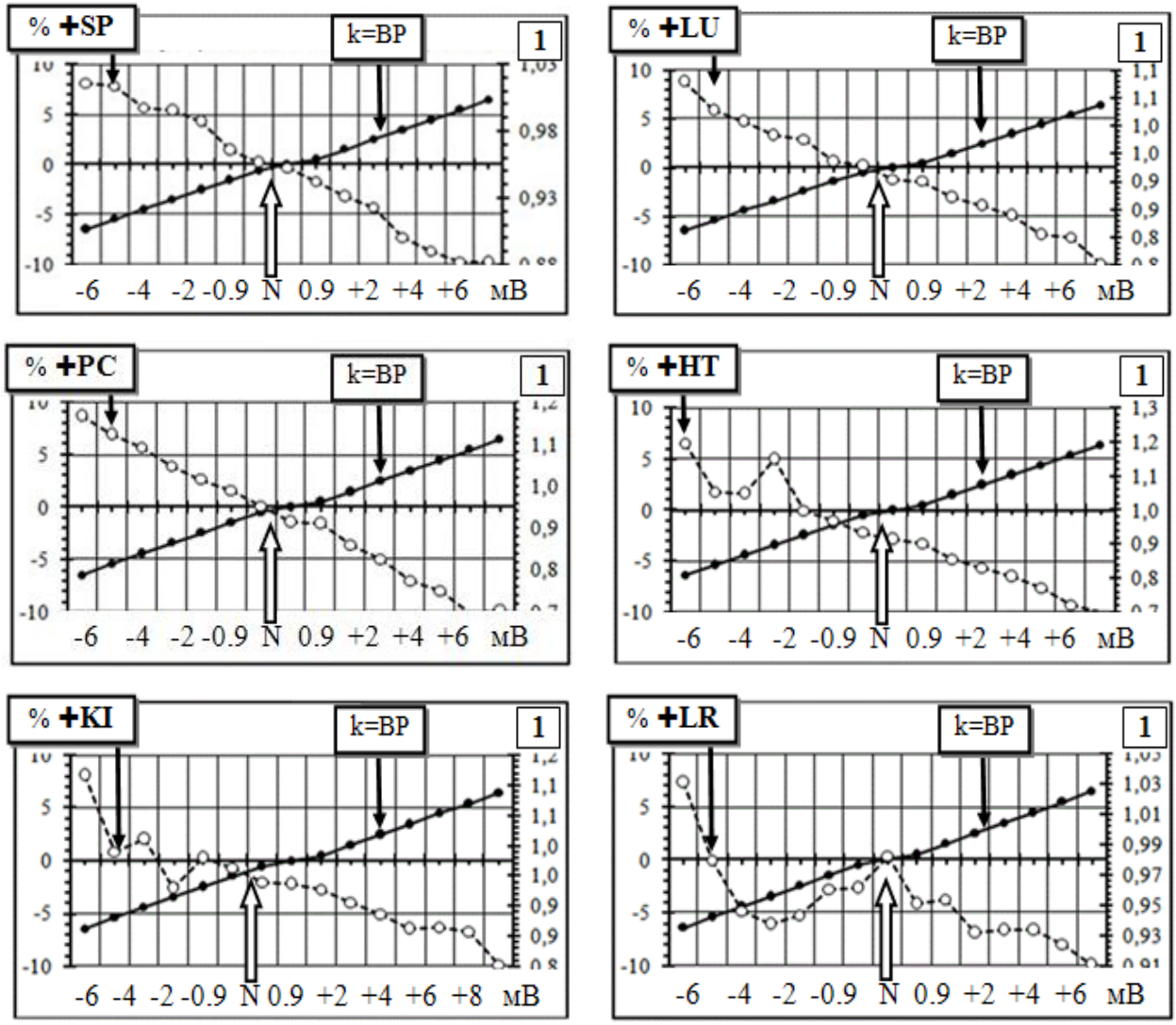


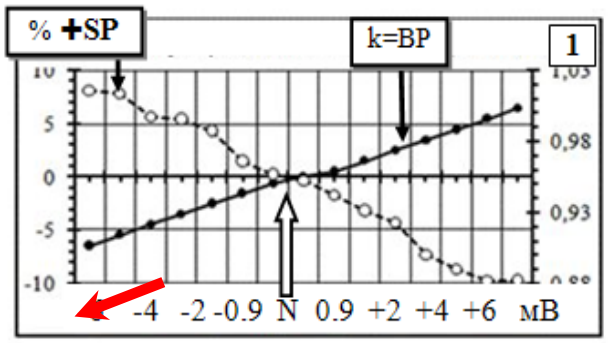
Fig.5 Dynamics of k-VE during excitation of YIN-systems.

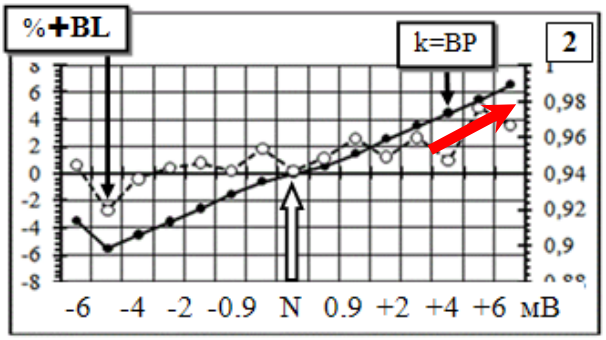
Dynamics of k-VE through the Systemic *YANG-YIN* groups

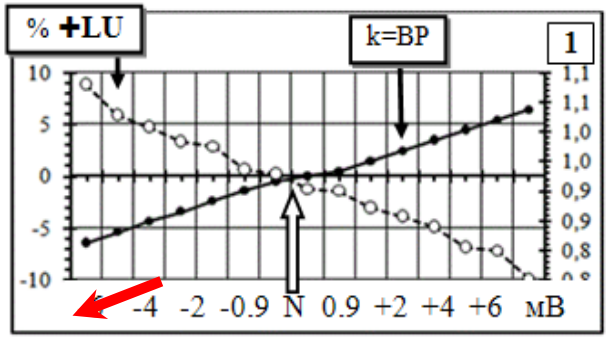
And now let us compare the dynamics of systemic vegetative coefficients through separate *YANG-YIN* groups (fig.6) and become confident in the following.

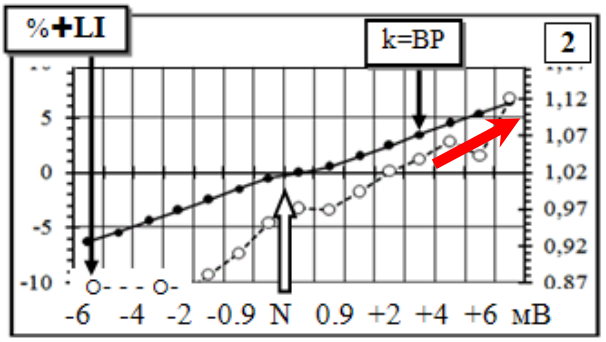
Growth of k-VE accompanies sympathetic orientation of YANG channels, and their oppression, on the contrary – parasympathetic orientation of YIN-group channels. The received results point to the dia-gnostic value of k-VE during assessment of the levels of functional-vegetative disorders. At the same time it is interesting to note the specific synchronous-asynchronous dynamics of k-VE during excitation of functional systems BL-YANG and LR-YIN.

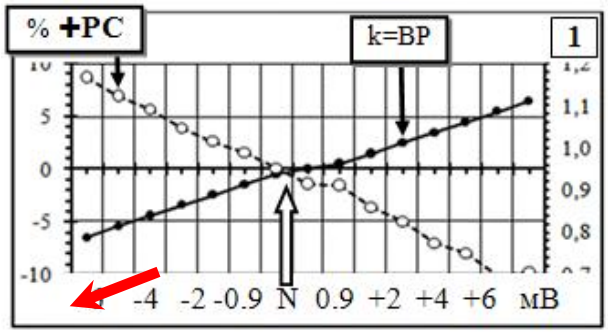
Parasympathetic orientation of k-VE during excitation of YIN channels (1).	Sympathetic orientation of k-VE during excitation of YANG channels (2)

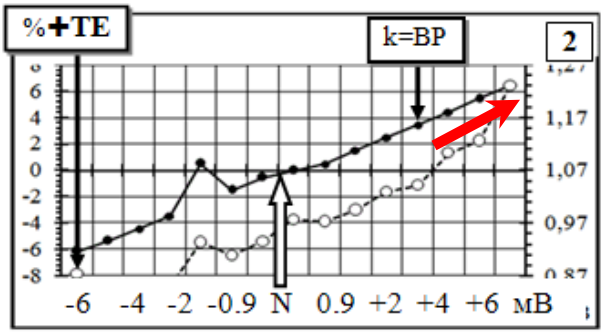

% +SP
k=BP
1
-4 -2 -0.9 N 0.9 +2 +4 +6 мВ

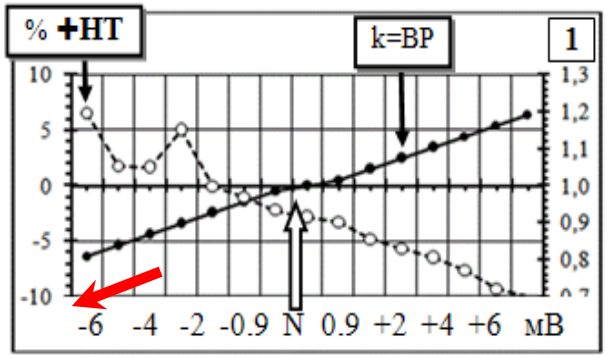

%+BL
k=BP
2
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ

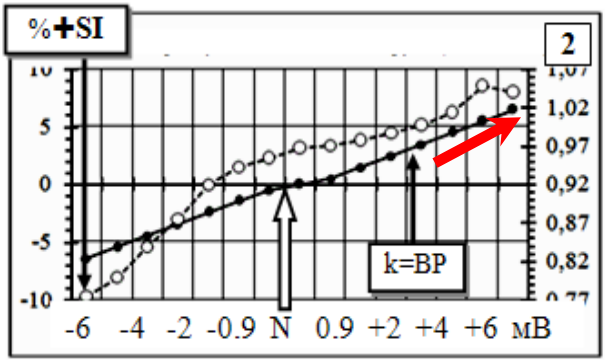

% +LU
k=BP
1
-4 -2 -0.9 N 0.9 +2 +4 +6 мВ

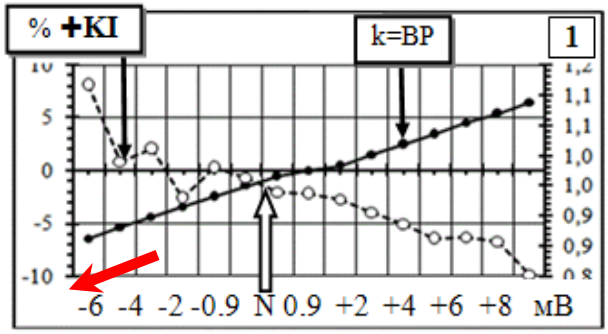

%+LI
k=BP
2
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ

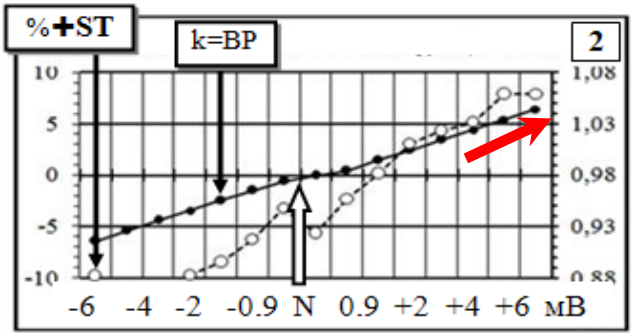

% +PC
k=BP
1
-4 -2 -0.9 N 0.9 +2 +4 +6 мВ


%+TE
k=BP
2
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ


% +HT
k=BP
1
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ


%+SI
2
k=BP
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ


% +KI
k=BP
1
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 +8 мВ


%+ST
k=BP
2
-6 -4 -2 -0.9 N 0.9 +2 +4 +6 мВ

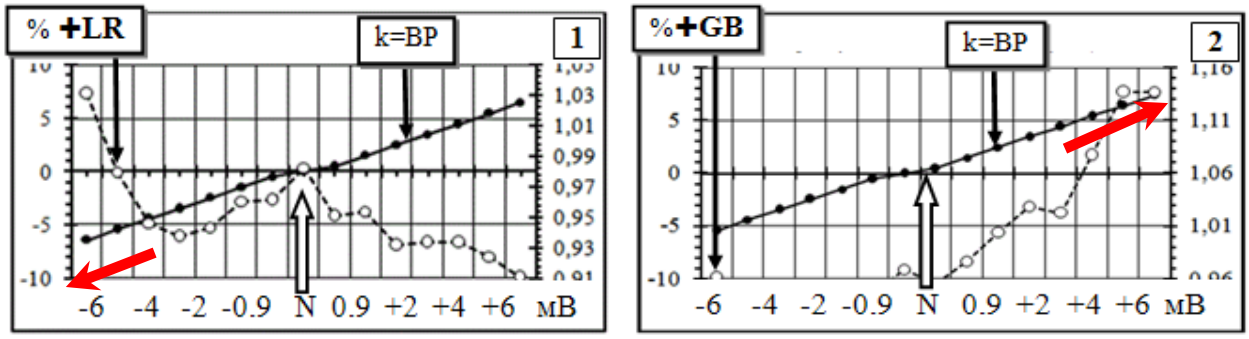


Fig.6 Sympathetic (2) and parasympathetic (1) dynamics k-VE.

3. VEGETATIVE INDEXES AND THE DEPENDENCY OF YANG-YIN SYSTEMS

Increasing dynamics of **k-VE** in female and male groups has no gender peculiarities. The examples are synchronous with the dynamics of vegetative coefficients (**k**) functional reactions of LI-TE-SI, ST-GB (*YANG* group), asynchronous of LU-PC-HT, KI (*YIN* group) and paradoxical system reactions of BL (*YANG*) and LR (*YIN*; fig.7). The latter distinguishes the specific activity of the mentioned systemic groups.

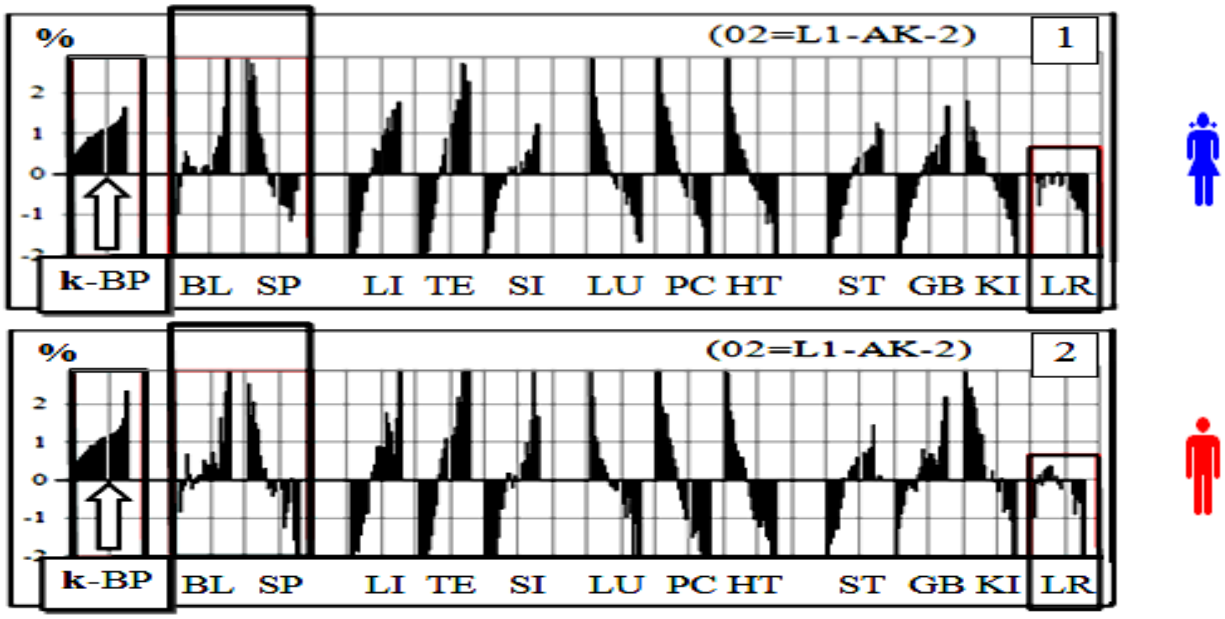


Fig..7 Analogical systemic dependency in female (1) and male (2) groups during growing dynamics of k-VE.

And now let us observe our issue from a different point of view: how do indexes of vegetative homeostasis [quantity of cases of sympathetic (SA) and parasympathetic (PA) activity] depend on excitation of separate systems of *YANG* and *YIN* groups?

There is an issue of the dependency of separate vegetative indexes on excitation of functional systems of *YANG* and *YIN* groups.

Vegetative dependency on the activity of the channels of YANG-group

Biophysical reality unambiguously testifies that the growing excitation (energy activation) of the functional systems of *YANG*-group (LI-ST-TE-SI-GB-BL) conditions possi-

ble growth of the number of cases of sympathetic activity (**SA=CA**) and decrease of the number of cases of parasympathetic (PA=ПА) activity [12.347 observations; fig.8].

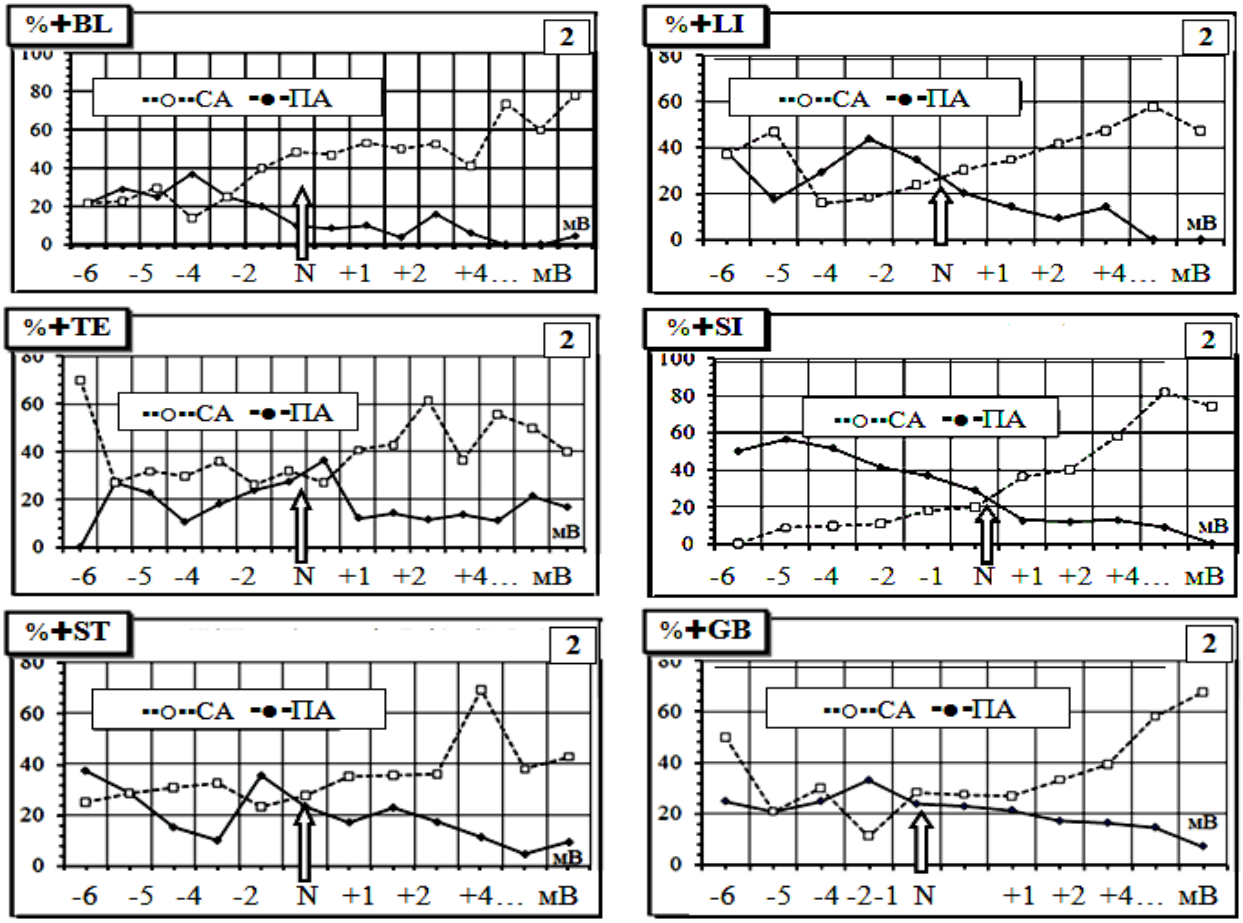
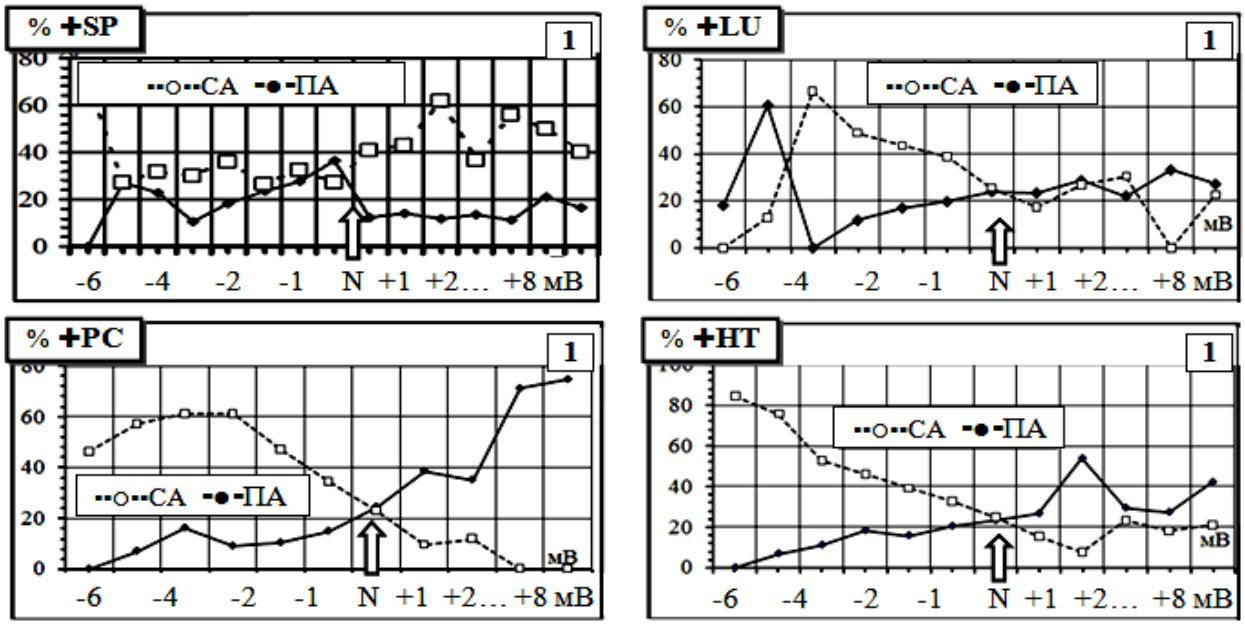


Fig.8 Sympathetic orientation of excitation of YANG channels

Vegetative dependency on the activity of the channels of YIN-group

Growing excitation of the functional systems of the *YIN*-group (LU-SP-PC-HT-LR-KI) conditions possible growth of the number of cases of parasympathetic activity (**SA**) and decrease of parasympathetic (**PA**) activity [12.347 observations; fig.9].



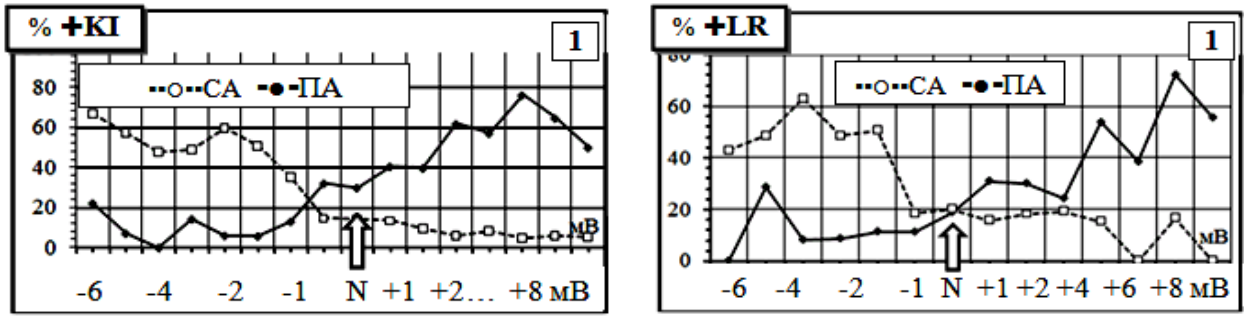


Fig.9 Parasympathetic orientation of excitation of YIN channels

SA and PA on YANG-YIN groups

And now let us compare the dynamics of sympathetic (SA) and parasympathetic (PA) dependency on excitation of separate channels *YANG* and *YIN* groups (fig.10). Analysis of the represented material testifies to the following.

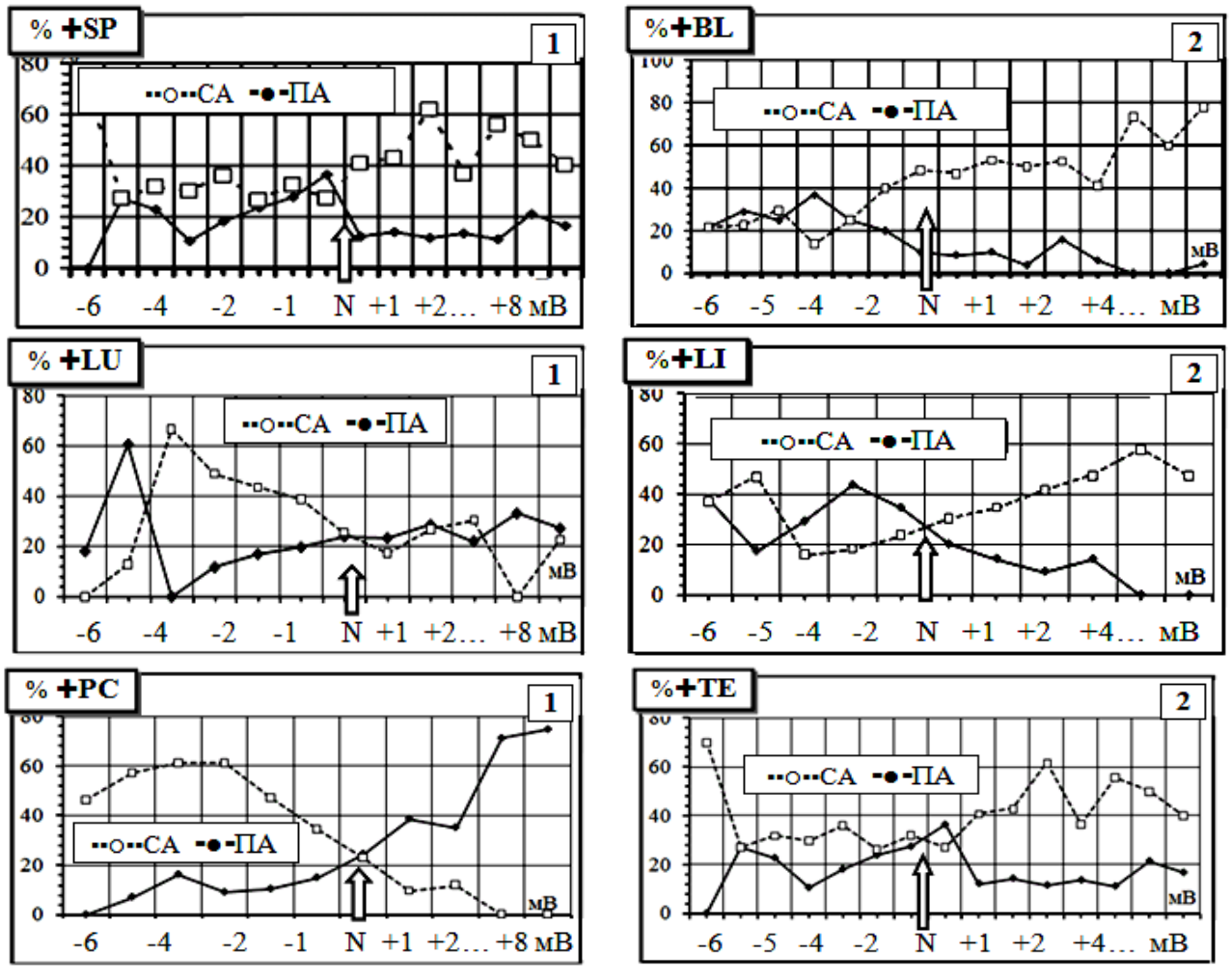
1)Growing excitation of separate systems of *YANG*-group conditions the increase of a number of cases of sympathetic activity.

2) Growing excitation of separate systems of *YIN*-group conditions the increase of a number of cases of parasympathetic activity.

3)The activity of the channels of *YANG-YIN* groups has clearly expressed vegetative orientation.

Parasympathetic orientation of excitation of YIN channels (1)

Sympathetic orientation of excitation of YANG channels (2)



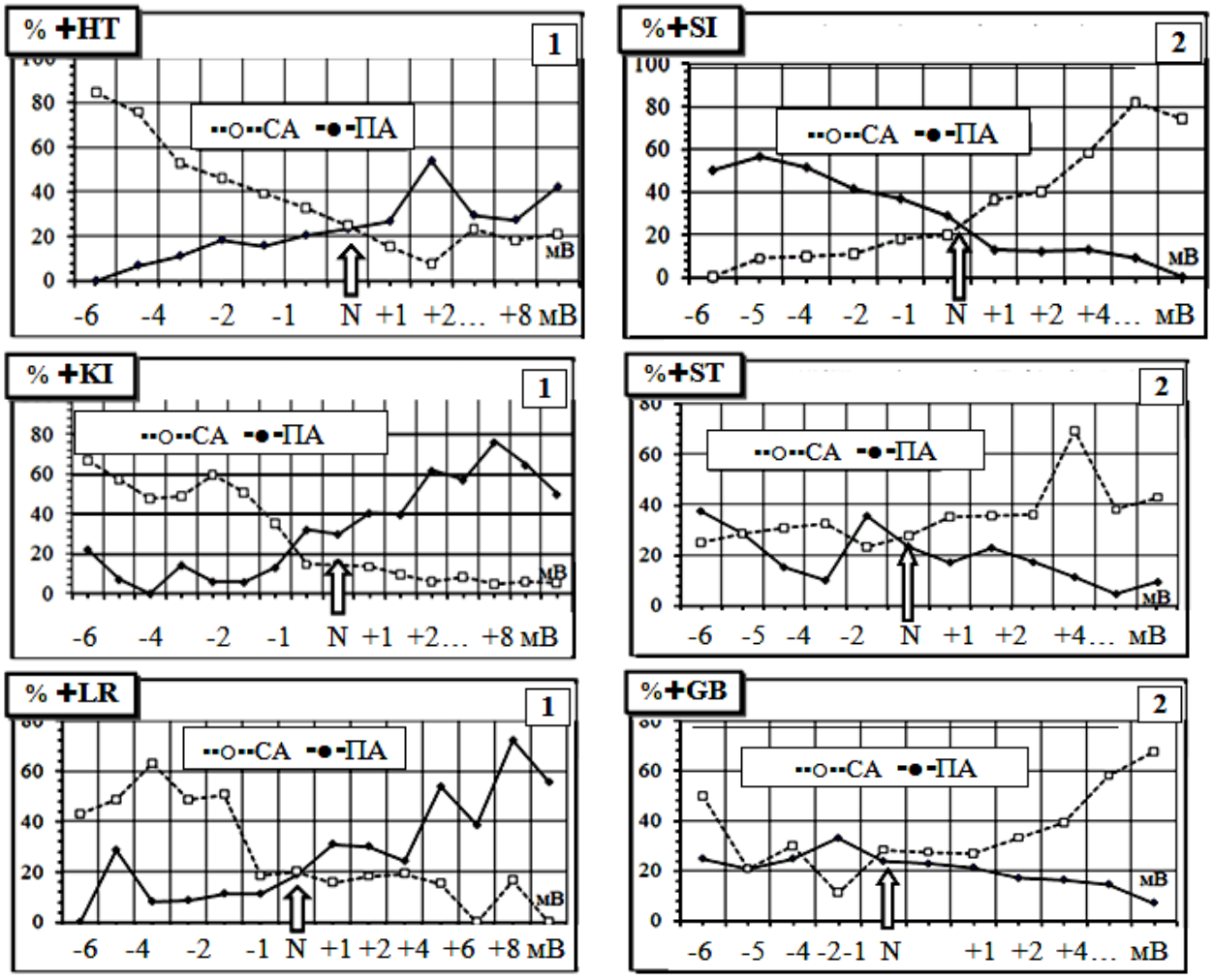


Fig.10 Systemic sympathetic (2) and parasympathetic (1) orientation.

Analysis of the previous material unambiguously testifies that a number of cases of sympathetic activity can possibly depend on the growth of activity of the functional systems of the *YANG*-group, and parasympathetic – on the growth of activity of the functional systems of the *YIN*-group.

There is an issue of interdependent dynamics of vegetative indexes of (SA and PA) with the indexes of the zone of vegetative equilibrium.

Conclusion

1)Traditional *Acupuncture* therapy has a direct relation to functional-vegetative homeostasis.

2)Traditional acupuncture channels are specific systems of functional-vegetative information.

3)Conception *YIN-YANG* syndromes is comparable with the understanding of parasympathetic and sympathetic activity of VNS

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