The importance of anthropogenic factors in the violation of the reproductive system of men Primorsky Territory, problems of diagnosis and treatment G.P. Atyushev (State Medical University, medical clinic "DV-Diagnostic", Vladivostok, Russia)

One of the notable global demographic trends in the second half of the 20th century was the deterioration in reproductive health indicators. According to the UN Environment and Development (1992), for the period 1960-1990. the fertility rate decreased by 1.5 times. More than 12% of married couples in the world are infertile, and the male factor in infertile marriages is 30-50%.

The most significant both in scientific and practical terms, but at the same time, unfortunately, extremely poorly studied are the issues of its ecological dependence, most of which are of anthropogenic origin. The distribution and content of about 4 million toxic substances determine the natural decline in the population due to high morbidity, mortality, short life expectancy, especially for men, which is not compensated for by an extremely low birth rate [1, 2]. This is despite the fact that a significant part of the population (54%) in cities and towns of Primorsky Krai lives in conditions of constant excess of maximum permissible concentrations (MPC) of harmful substances in the air, soil and water only for the period 2000-2001. their increased by 1.4 times [3].

The region is included in 20 regions of Russia with a significant predominance of concentrations of toxic substances (lead, benzopyrene, nitrogen and sulfur oxides, carbon monoxide, hydrogen sulfide and formaldehyde), which have not only carcinogenic properties, but significantly disrupt spermatogenesis and androgenopoiesis due to interference with the mechanisms of their regulation or direct cytotoxic action. In this regard, the problem of their timely diagnosis and correction becomes extremely urgent.

The aim of the study was to study the effect of various toxic burdens (electromagnetic loads, chemical compounds, and infectious factors) on the reproductive function of men, using the ART method "IMEDIS-TEST" and the possibility of bioresonance therapy in the system of endoecological rehabilitation) [4].

Patients were examined using electropunctural diagnostics (EPD) on the "IMEDISTEST" apparatus. The field of activity and home conditions for most of them came into contact with various types of electromagnetic radiation (cell phone, computer, microwave oven) or with other influencing environmental factors.

The contingent of studies included 102 people, including 37 infertile married couples and 65 men who applied for infertility, living in a civil marriage. The age of the patients varied in the reproductive-fertile range - from 20 to 53 years. Almost all patients indicated stress, chronic diseases of the genitals, sexual dysfunctions, decreased libido, and those over 25–40 years old - the absence of desired children. Many of them in the past have repeatedly undergone treatment for various forms of infertility, but to no avail. The men under study were conditionally divided into 2 groups: the first of them consisted of residents of Vladivostok (54 people), the second was residents of the districts of the region (48 people).

At the initial stage of the diagnostic algorithm by the method of vegetative resonance test (ART), the presence of electromagnetic (ELM) and geopathogenic loads (GN) was indicated, so in the Vladivostok group, respectively, 20 (37.0%) and 8 (14.8%) patients, which amounted to 51.9%; and among "residents of the region" it was tested in 9 (18.8%) and 5 (10.4%) patients, or 29.2%, and in total it was observed in 42 patients (41.2%). The radioactive load (RN) was tested only in group I in 16 of the naval servicemen

## patients (29.6%).

Based on the problem, the affected organs of the male reproductive system in 55.8% of cases experienced the burden of the above loads.

The degree of morphological and functional changes in the genital area was determined through nosodes-indicators of male genital organs in different potencies. Selected organopreparations were tested for toxic burden (Metabolics). That, in the Vladivostok group, an indication of the presence of pesticides and herbicides was noted in 8 (14.8%) patients, in the "district residents" group - in 12 (25%) patients.

According to many authors, the main reason for the formation of male infertility should be recognized as urogenital sexually transmitted infections (STIs) [5]. Their presence in male reproductive organs was confirmed by bacteriological, PCR, ELISA methods. If in group I the presence of AMI was detected in 49 patients, which amounted to 90.7%, then in group II it was slightly lower - in 42 patients or 87.5%. Unfortunately, in this direction there are discrepancies with laboratory diagnostics, especially for causative agents of viruses, fungi and their mixed forms from 25 to 76% of cases.

Subsequently, nosodes of the male genital tract with altered pathophysiological processes and nosodes of "markers of environmental pollution" were recorded on homeopathic crumbs through BRT in the drug testing mode without connecting leads. In the process of loading, an organ was determined that was able to neutralize "markers of environmental pollution" and restore, through an optimal biological index, metabolic and trophic processes in the organs of the reproductive system against the background of BRT in the mode of drug testing.

## results

A month after treatment with a frequency of 6.2 Hz (with a record for homeopathic crumbs), tests for electromagnetic, geopathogenic loads persisted in 13 people (24.1%) in group I and in 4 people (8.3%) in group II. in total - in 17 patients (32.4%). The radioactive load, observed only in group I, was recorded in 3 people (6.8%).

And after 3 months, control measurements indicated the absence of these loads. The obvious reason for the protracted ELM, GN and RN was the failure to eliminate the causes of the effects of electromagnetic fields or stay directly in the radiation zones of natural anomalies (IPA), as well as insufficient activation of adaptive protective processes against the background of bioresonance therapy to neutralize external loads. The dynamics of integrative indicators for ART is shown in Table 1.

Table 1

Results of electronic biofunctional organometry (EBO) in men with various environmental factors

Tested parameters	Group Vladivostok (n = 54) Ref. Con- Con- I			The group "residents districts "(n = 48) Ex. Con- Con-			Total Ref. Con- Con-		
parameters	data		oll II dat		I		ata troll 1		
Geopathogenic load	eight	4	-	five	one	-	13	five	-
Radioactive load	sixteen	3	-	-	-	-	sixteen	3	-
Electromagnetic high frequency <sup>fields</sup>	twenty	nine	2	nine	3	-	29	12	2
Pesticides, herbicides	eight	-	-	12	2	-	twenty	2	-
Toxic substances	12	five	-	3	one	-			
Urogenital infections	49	27	6	42	22	4	91	49	10
Tension endocrine systems	36	twenty	12	18	nine	4	54	29	sixteen
Voltage									
immune systems: Moderate Expressed Depletion	sixteen twenty eight	<sup>eight</sup> 10 2	6 nine one	eleven sixteen 3	eight 3 -	4 2 -	27 36 eleven	sixteen 13 2	10 <sub>eleven</sub> one
Psychogenic load:									
Level one, 2 (norm) Level 3 Level 4	31 fifteen eight	46 6 2	49 five -	35 <sup>eight</sup> five	45 2 one	46 2 -	66 <sub>eleven</sub> 13	91 <sup>eight</sup> 3	95 7 -
Flaw minerals	fourteen	6	2	4	2	-	18	eight	2
Deficit vitamins	eleven	one	-	7	one	-	18	2	-
Flaw enzymes	fourteen	10	4	6	4	3	twenty	fourteen	7
Biological index	15-18	11-14	9-12	14-17 1	0-13	8-12	-	-	-

The regulatory and protective systems in the body are endocrine and immune systems, which, due to the existing mechanisms of self-regulation and self-defense, can neutralize the effects of external factors, in particular in target organs. Thus, the tension of the endocrine system in the Vladivostok group, observed in 66.7% of cases, decreased to 22.2%. Among those surveyed in the group "residents of districts", its tension decreased from 37.5% to 8.3% of cases. In general, the effectiveness of treatment was traced in 65.5%. cases.

The functional state of the immune system changed significantly. So, the observed "failure" of immunity in a state of exhaustion, both

groups, respectively, in 8 (14.8%) and 3 (6.3%) patients. More indicative are the results of a pronounced degree of tension of the immune system in patients of group II from 16 (33.3%) to 2 (4.2%) people, and in group I - from 20 (37.0%) to 9 (16.7%) Human. In the surveyed contingent with a moderate degree of stress of the immune system, the effectiveness of treatment was higher in group I in 6 (11.1%) patients than in group II - in 4 (8.3%) patients. The given levels are considered as average indicators of the energy state of the endocrine and immune systems, thereby contributing to the development of somatic pathology in the organs under their care, leading to impaired reproductive function.

Psychovegetative loads were inherent in 102 surveyed. Moreover, the degree of their severity depended on the place of residence. If in group I, 8 (14.8%) patients had an increased level of load and in 15 (27.8%) - average, then, in group II, respectively, 5 (10.4%) and 8 (10, 4%) of patients. It follows from this that various levels of psycho-vegetative loads were a negative factor not only for the nervous system, but were also transmitted to target organs, aggravating the development of pathology in them of varying degrees. So, in 32 patients, sexual disorders were observed: decreased libido, erectile dysfunction.

Metabolic processes in the reproductive organs of men largely depended on the level of saturation of the body with biological active substances (BAS) - minerals, vitamins, enzymes. The change in their level, in the form of integral indicators - deficiency or deficiency - looked as follows: in group I - the indicators were worse, respectively, in 12–6–8 (48.1%) patients, than in group II - in 4–7 –3 (29.2%) patients. In general, the deficiency of the above BAS was registered in

37.5% of cases surveyed participants. The functional state of the germ cells also changed, the number of motile spermatozoa increased in group I by 45.8%, in group II - by 58.9%. Significantly improved indicators of pH of the ejaculate, the quality of the juice of the prostate, decreased the number of immature germ cells, disappeared phenomena of leukocytic pathospermia.

Thus, after the elimination of negative environmental factors and the conducted rehabilitation therapy, 42 (40.4%) married couples subsequently were able to find the long-awaited joy - the birth of a long-awaited child.

Based on the preliminary results of electropunctural diagnostics, the following conclusions can be drawn:

1. The test results for ART "IMEDIS-TEST" allow timely to study, especially at the preclinical stage, the influence of anthropogenic factors (electromagnetic loads, chemical compounds, infections) on the patient's body. It was reflected in the etiologically significant factors in the formation of various disorders, including reproductive function in men living in the megalopolis - Vladivostok and districts of the region.

2. It should be recognized the prevalence of urogenital infections, sexually, which is a serious factor affecting the male genitals, which leads to disruption of the functions of the endocrine, immune and psycho-vegetative systems of the body and, as a consequence, to a change in the reproductive function of the male population of Primorye.

3. The given data show the wide possibilities of organotropic, nosological and symptomatic therapy. The physiological nature and effectiveness of the therapeutic effect open up great opportunities in the need for widespread use of bioresonance therapy in the complex treatment of male infertility.

4. The resulting integrative-individual characteristics of patients with impaired fertility allows you to optimize the diagnosis, and the results obtained can be used in various options for complex therapy.

## Literature

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