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ABOUT INDICATORY ROLE OF THE BIOSUBSTRATES CRYSTALLOGENESIS

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History of the biocrystallization phenomenon scrutiny includes over 30 years [1, 3, 4], but the first mention about it had been written in 1804 [2]. There are many papers, which demonstrated diagnostic function of crystalloscopic and teziographic facia [4]. In that time, the unitary publications devote to ability of crystallographic methods for indication of treatment effectiveness [1, 3]. This thesis was aim of our investigations.

Materials and methods. We study the dynamics of the transformation of teziocrystalloscopic picture of some human biofluids (saliva, urine, blood serum, teardrops etc.) in the management process. Free crystallization of biomaterial (classic crystalloscopy) was examined by using the special identification table, which consist of 5 classes of crystal and amorphous structures and half-quantitative additional criteria, such as facia destruction degree [FDD], regularity [R], cellularity [C] and marginal belt [MB]. Teziographic facia was evaluated by complex of basic (initiation coefficient [IC]; belt coefficient [BC]) and additional parameters [1, 3]. We used two variants of teziographic test. There are comparative and differential teziography, which discrepant by number of the basic substances. Data were processed with statistic programs (SPSS 11.0; Primer of biostatistics 4.03).

Results. On the base of our data it was demonstrated, that the dynamics of the biofluids' teziocrystalloscopic picture correlates with patient common condition and his clinic-functional status. This thesis was veriflicated on patients, which have gastroenterological, neurological, traumatological, cardiological and nephrological diseases. We tested the dynamics of free and initiated biosub-

strates crystallogenesis on medicamental, surgical, balneological and physiotherapeutic management. On our opinion, the most informative and comfortable for practical using biosubstrates are saliva and urine, but informativity of the monitoring highly increase, if two or more biofluids are analysed simultaneously. It was shown, that character of the crystalloscopic specimen's changes (on the general tendency to organization or destruction of the facia) illustrates the treatment effectiveness. This conclusion with respect general tendency is formed by the analysis of crystallization rate (crystal concentration in microscope visual field), facia destruction degree, homogeneity of elements allotment, cellularity, marginal zone width etc. It is determined, that positive treatment results associate with decreasing of facia destruction degree, cellularity; increasing of facia homogeneity and normalization of crystalloscopic rate for own crystallization (initiation potential for tezigraphic test).

We composed universal algorithm of the crystalloscopic monitoring of patient functional status, which consist of the two or three control points. If we estimate short-time or unitary medical interference, it is enough to investigate the baseline and final condition. In this time the taking of biosubstrates is accomplished. For the treatment scheme, which realized in long time, the three-points investigation is most suitable.

Conclusion. So, it was ascertained, that crystallographic methods of biofluids investigation can be used for the treatment control.

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CLIMATIC AND GEOGRAPHIC FEATURES AND DEATH RATE IN REPUBLIC SAKHA (YAKUTIA)

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The Republic Sakha (Yakutia) occupies territory in 3103, 2 thousand sq.km, that makes 18 % of all territory of the Russian Federation. Forty percent of territory is behind Polar circle, in a zone of a long-term frozen ground. In its limits three hour zones are located.

Distinctive feature of a climate - expressed anticyclone mode of weather and frequent intrusions of air masses from Arctic Ocean with very small maintenance of water steam in summer. Winter is long, cold and not snowy; on a greater part of territory temperature is varying from 40 below zero up to 50 below zero. Summer is short, droughty, and rather hot. In some days of July in the Central Yakutia the temperature reaches up to +31 - +38.

Population of Yakutia, according to census of 2002, is 949 thousand people. The indigenous population, including representatives of small nationalities, makes 50 % (45 % are Yakuts and 5 % - small in numbers people). Indigenous small in numbers people are presented with Evenks, Evens, Dolgans and Yukaghirs. The basic part of non-indigenous population is represented with Russians (41 %), and also with representatives of other people and nationalities.

Centuries-old evolution of indigenous population of the Far North has generated a lot of the adaptive morphological and functional features, allow surviving and saving health in severe conditions of an environment. However the mortality rate coefficient of the population of Yakutia constantly increases and since 1990 for 2005 he has increased in 1, 5 times (from 6, 8 up to 10, 2) whereas in Canada similar on climatic and geographic conditions this parameter in 2006 according to the data of WHO was 7, 86. For last decade (1996-2006) death rate of the population of Yakutia on the basic classes of the reasons on 100 thousand people constantly increases. Moreover the basic part of growth for this period is made by illnesses of system of blood circulation (in 1, 3 times). Only for last five –year period (2002-2006) death rate from IHD (ischemic heart disease) has increased in 1, 13 times, from a sharp heart attack of a myocardium - 1, 35, from cerebrovascular illnesses - 1, 11. It is especially necessary to emphasize fast growth of death rate from illnesses of endocrine system, frustration of a feed and a metabolism which has increased for this period in 1, 53 times, from them