New View To Problem Perimenopausal Osteoporosis

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Annotation: Worldwide, perimenopausal osteoporosis is one of the most common gynecological pathologies among women and numerous studies in recent years have focused on the prevention of this pathology to identify high-risk groups of burden. To date, one of the serious problems requiring immediate treatment is to determine the role of the relationship of biochemical markers with steroid hormones among women in the perimenopausal period older than 50 years, which would allow treating patients burdened with this disease by in-depth analysis of metabolic and hormonal disorders in the blood.

Keywords: perimenopausal osteoporosis, biochemical markers, metabolic changes.

Relevance. In the second half of the 20th century, an increase in the life expectancy of the population began to manifest itself clearly, in 90% of cases modern women spend 1/3 of their lives in the postmenopausal period [8;1189-99 p., 9; 8-15 p.]. Climacteric or (climax, climacteric period) is a physiological period in a woman's life, on the basis of which invasive processes are observed in the reproductive system. The period of perimenopause is the transition of a woman from reproductive to old age, which, on average, lasts 7-8 years. In recent years, there have been many reports that as the life span of a human breed increases, it can spend more of its life in the same period [3; 23-27.b.,4; 45-49.b.,5; 59-63.b., 7; 954-959 p., 10]. This period is accompanied by many peculiarities, it can lead to the emergence of several types of complications, one of which is osteoporosis [1;21-23 b., 2; 50-55 b., 6; 366-368 b.]. There are several methods for its detection, from which, through the analysis of biochemical and hematological indicators, it is possible to identify risk groups and take measures to prevent and treat them in a timely manner.

Research objective. Coordinate the diagnosis of the disease using modern methods of predicting the risk of developing osteoporosis in women during perimenopause.

Research materials and methods. During perimenopause, 121 women were studied who were risk factors for developing osteoporosis. All women were examined at the Bukhara branch of the Republican Scientific Center for emergency medicine (RShTYoIM) and the perinatal center of the Bukhara region. Group 1 - control group-Women of the control group during the perimenopause were included. Group 2 - a comparative group-there were signs of perimenopause: female patients who suddenly felt a feeling of warming up or cooling down, depression, insomnia, irregularly taking phytoestrogens at the age of perimenopause, and not having a scheduled, periodic follow-up at the reception of an obstetrician-gynecologist doctor. Group 3-the main group-40 women of the period of perimenopause who systematically under the observation of specialists, applied the amount of Lenzetto transdermal spray with an individual selection (1-2 doses) under the control observation of indicators that we are studying for 3 months or more on their appointment.

The median age of those examined was 46.9 years. Clinical, clinical-equipment and laboratory studies were carried out in all women examined. Biochemical markers (calcium and alkali phosphatase levels in peripheral blood) and hormones (estradiol, FSG, progesterone) were identified. Methods of variational

parametric and nonparametric statistics were applied with the calculation of the average arithmetic (M), average quadratic deviation (s), average standard error (m), relative dimensions (frequency, %) of the studied indicator. The statistical value of the measurements obtained was studied according to the normality of the distribution and the equality of head dispersions (–Fisher criterion) according to the ecstasy criterion, determined by the method of styling (t) with the calculation of the probability of error (R). The R<0.05 reliability level was adopted as statistically significant changes.

Research results. Hematological indicators are one of the main parameters of the internal sphere of the human organism, which allows you to assess the state of the organism in different age categories. Thanks to this, the purpose of this research work was the study and evaluation of hematological indicators in women during perimenopause. The results obtained in the examined women (n=121) are compared with the reference data. An analysis of the results of the study on this research work showed that hematological indicators in this category of women do not change significantly.

Of the 11 indicators, it was established that 5 parameters (45.5%) differed reliably from the reference values (R<0.05), which changed in different directions. If hemoglobin levels in the blood decreased reliably to 105.24±1.06 g/l (R<0.05), there was also a decrease in the relative size of segment-nucleus neutrophils (45.95±0.39%, R<0.05). In this category of women, the amount of lymphocytes in the blood also decreased reliably– up to 18.51±0.40% compared to reference values (R<0.05). Conversely, an increase in hematological parameters was observed in Rod-core neutrophils (up to 8.65±0.26%) on ECHT (up to 18.36±0.49 mm/h). A decrease in the amount of hemoglobin in the blood, relative amounts of segment-core neutrophils and lymphocytes indicate a decrease in the protective forces of the female body, if there are no pus-inflammatory pathologies during the examination in this category of women, then this condition indicates a decrease in the body's resistance during perimenopause. Analysis of hematological indicators,as in the general group, was carried out according to research groups (groups 1, 2 and 3). The results obtained and their analysis showed that the trend of changes across groups is similar to that of the general group. In addition, the trend of change between research groups, which has become closely related, shows the representativeness of the groups being selected compared.

In all groups in which hemoglobin levels in the blood were tested (respectively in groups - 102.53±2.28 g/l; 106.13±1.27 g/l; 107.05±1.74 g/l), a reliable decrease of – R<0.05 was established compared to reference values (Table 2). The next parameter that decreased relative to reference values was a decrease in the amount of segment-nuclear neutrophils in the blood of women during perimenopause. The fact that reliable differences in this indicator (R>0.05) are not detected between the groups being compared draws attention to itself. Another parameter that was reliably reduced compared to reference values was the relative amount of lymphocytes. By Group, respectively, they are 18,07±0,72%; 19,58±0,72%; 17,87±0,62% made up of, which is less than the reference values (R<0.05).

In addition, the 2nd indicator – Rod core neutrophils and ECHT were higher than the data of reference values (R<0.05). If the amount of Rod-core neutrophils was greater than the upper limit of reference values (R<0.05) by groups 1.42 times (8.54±0.67%); 1.43 times (8.59±0.25%) and 1.47 times (8.83±0.05%), then the amount of ECHT was 1.28 times (19.22±1.08 mm/ h) by groups, respectively; 1.21 times (18.15±0.71 mm/h) and increased 1.18 times (17.71±0.68 mm/ h) (r<0.05). The remaining hematological indicators (the total amount of Erythrocytes, Leukocytes, platelets, eosinophils, basophils and monocytes) were almost at the limit

of reference values and were slightly different from them. A decrease in indicators that respond to the resistance of the body indicates its weakening. Thus, the study and evaluation of hematological indicators in women during perimenopause shows that 45.5% of cases showed a decrease in the resistance of the body, and reliability changed in different directions. The comparative parameters of the selected groups changed similarly to the general group, where the trend of changes in different directions was maintained. But a reliable difference between the groups was hardly observed.

In the later stages of the studies, biochemical markers were studied in women during perimenopause. The results obtained showed that biochemical markers (alkaline phosphotase, calcium, estradiol) differed from reference values in different directions when examined.

The amount of alkaline phosphatase in the blood of women during perimenopause decreased compared to reference values – 231.13±2.71 birl/l ($r<0.05$) against 240 birl/l, respectively. There was also a reliable decrease in calcium levels to 1.95±0.03 mg/dl in the blood of those tested against the lower limit of reference values - 2.0 mg/dl ($R<0.05$). Analysis of the results of the study showed that the values of the biochemical parameters of the blood (alkaline phosphatase, calcium) were correctly proportional in women during perimenopause. This fact indicates that these indicators can be used as a predictor of assessing the state of the organism in this category of examined women. The analysis of all the above indicators by research groups is given in the table below.

As stated above, no reliable differences were detected between the comparison groups on hematological parameters, a difference between Group 1 and the remaining two groups (Group 2 and 3) was observed on biochemical parameters and the amount of densitometric parameter – T-score.

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