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THE MAIN ASPECTS OF MENOPAUSAL METABOLIC SYNDROME IN THE CLINICAL COURSE

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ABSTRACT---Objective*The aim of the study was to conduct a comprehensive assessment of women's health in the late reproductive, peri- and postmenopausal periods to determine the frequency, clinical course, as well as the prerequisites for the development of climacteric syndrome (CS) and metabolic syndrome (MS). We can state that the main triggers are hyperinsulinemia, insulin resistance and visceral obesity, which contribute to dyslipidemia, oxidative stress, inflammation, altered coagulation and atherosclerosis observed during menopause. Timely undetected and untreated metabolic disorders can adversely affect the duration and quality of life of women.*

Materials and methods:*Examination of 1484 women aged 35-70 and conducting general clinical, special gynecological, biochemical (lipid spectrum with calculation of the atherogenic index of plasma, glucose level in blood serum), as well as conducting an assessment scale of Kupperman menopausal index for the presence of CS with determination of its severity, as well as determination MS frequencies.* ***Results:****It was determined that CS was observed in 93.3% of the examined women against a background of aggravated somatic and gynecological pathology. This led to the development of menopausal syndrome in 30.6% of women, and most often it was observed in perimenopausal women (45-54 years old) - in 33.9% and almost every second woman (55.4%) with moderate grade CS gravity.* ***Conclusion:****The presence of MS indicators significantly aggravates the course of menopause, causing high comorbidity and the development of the clinic of CS.*

Keywords*---perimenopause, postmenopause, late reproductive period, climacteric syndrome, atherogenic index, Kupperman index.*

I. Introduction

The global increase of life expectancy poses a challenge for society - the creation of conditions for improving its quality. According to the definition of the World Health Organization, the framework of an aging population is pushed back and for women it begins far abroad menopause.[1]Menopause is a natural physiological process of aging and a deficiency of female hormones. Later ovaries gradually become less active and reduce the production of sex hormones (estrogen and progesterone). As a result, menstruation stops forever. Menopause of women is considered in the absence of a menstrual cycle for one year without any underlying reason. Some women experience mild problems or do not experience them at all, but some women have a particularly severe course[2]. However, the impending estrogen deficiency, starting from the late reproductive age, and continuing until the end of women's life, the accumulation of pathological conditions: somatic and obstetric-gynecological pathologies, chronic stress, previous surgical interventions, improper

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nutritional behavior, hypodynamia or vice versa overload - all this contributes to the development of pathological the course of the menopause[3–5].

A complicated form of menopausal syndrome (CS) is more often accompanied by socially significant diseases such as diabetes mellitus (DM), arterial hypertension (AH), and obesity[6,7]. It is known that the number of cases of type II diabetes in women, starting with perimenopause, increases by about 3 times compared with women of reproductive age[8]. The frequency of occurrence of hypertension is doubled in women aged 45-54 years compared with 35-44-year-old patients and is about 30%, and in the group of women over 65 years old - 68%. The number of obese women in permenopausal and postmenopausal women rises to 75–80%, compared with 25% of women of reproductive age[6,9]. It is noteworthy that all the diseases described above are components of the metabolic syndrome (MS) [8,10–12].

II. Material and research methods

A total of 1484 women in the late reproductive period, perimenopausal and postmenopausal women were examined. Depending on age, women were divided into 3 groups: group I, (n = 618) were women 35-44 years old, conditionally in the late reproductive period; group II, (n = 627) - women 45-54 years old - in perimenopause and group III, (n = 239) - women 55-70 years old - in postmenopausal women.

A general clinical (general examination, anthropometry, measurement of causal blood pressure) and a special gynecological examination were performed. To diagnose and assess the severity of CS, the Modified Menopausal Kupperman Index (MMKI) scale was used. Serum lipid fractions were determined for 256 women: cholesterol (cholesterol), triglycerides (TG), high density lipoproteins (HDL), low density lipoproteins (LDL), very low-density lipoproteins (VLDL), and fasting glucose. The atherogenic index (AI) was calculated by the formula of A.N. Klimova: AI = (TCh-HDL) / HDL. The diagnosis of MS was established on the basis of the criteria of the International Diabetes Federation (IDF), The National Cholesterol Education Program (NCEP), Adult Treatment Panel III (ATP III) in the 2009 modification [13,14] taking into account ethnicity[15].

Statistical processing of the results was carried out using the software package Statistica 6.0. The significance of differences in the groups was evaluated using Student's t-test, the differences were considered significant at $P \leq 0.05$. To determine the predictors of the complicated course of menopause, the odds ratio (OR) was calculated between groups with and without CS.

III. The results of the study

An analysis of somatic pathology showed that the most common pathologies were: goiter - in 576 (38.8%), gastritis - in 331 (22.3%), pyelonephritis - 314 (21.2%), anemia - 233 (15.7 %), and significantly more often this pathology was observed in women in the late reproductive period ($P \leq 0.05$) (Table 1).

Table 1.Somatic and gynecological pathology in women of various age groups, (abs, %)

Indicators	I group, , n=618	II group, , n=627	III group, , n=239

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	abs	%	abs	%	abs	%
Respiratory system diseases	77	12,5±1,3	100	15,9±1,4	45	18,8±2,5*
Goiter	282	45,6±2,0	223	35,6±1,9*	71	29,7±3,0*
Gastritis	146	23,6±1,7	140	22,3±1,7	45	18,8±2,5
Colitis	75	12,1±1,3	104	16,6±1,5*	45	18,8±2,5*
Pyelonephritis	139	22,5±1,7	137	21,9±1,7	38	15,9±2,4* **
Anemia	135	21,8±1,6	91	14,5±1,4*	7	2,9±1,1* **
HD	60	9,7±1,2	146	23,3±1,7*	96	40,2±3,2* **
DM	7	1,1±0,4	19	3,0±0,7*	13	5,4±1,5*
Depression	84	13,6±1,4	121	19,3±1,6*	47	19,7±2,6*
Adnexitis	95	15,4±1,4	57	9,1±1,1*	7	2,9±1,1* **
Uterine fibroids	38	6,1±1,0	104	16,6±1,5*	29	12,1±2,1*
Abnormal uterine bleeding	30	4,9±0,9	54	8,6±1,1*	13	5,4±1,5

* P≤0.05 the difference is significant compared with group I

** P≤0.05 in comparison with group II

Whereas HD was found in 302 (20.4%), depression - in 252 (17.0%), respiratory system diseases - in 222 (15.0%) and colitis - in 224 (15.1%) women in peri- and especially in postmenopausal women (P≤0.05). One in ten - 159 (10.7%) women had a history of chronic adnexitis, uterine fibroids were diagnosed in 171 (11.5%) (significantly more often during perimenopause in 105 (16.7%)), abnormal uterine bleeding was observed in 97 (6.5%), of which in perimenopause - in 54 (8.6%). The vast majority of women had a history of pregnancy and childbirth - 96.5%, 70.5% had an abortion, and 22% had a miscarriage. The average number of pregnancies was 5.1 ± 0.06, childbirth - 3.0 ± 0.03, artificial abortion - 2.6 ± 0.05, spontaneous miscarriage - 1.4 ± 0.05. The average age of menopause was 46.7 ± 0.2 years, the duration of postmenopause was 6.8 ± 0.3 years (1-38 years). Surgical menopause was in 92 (6.2%) women, premature in 49 (3.3%), and early in 150 (10.1%).

Clinical CS was observed in almost all women - 1369 (93.3%), while more often I degree CS was observed in women of all groups, but most often in women of the I age group - in 426 (68.9%) (Table 2). The average severity of CS in

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perimenopausal and postmenopausal women was observed 1.5 times more often - in 212 (33.8%) and 83 (34.7%), respectively, compared with women aged 35-44. Severe course of CS was noted much less frequently in all studied groups and amounted to 1.2% - in only 18 patients. A MMKIscore showed a predominance of a clinic of neurovegetative (18.9 ± 0.3 points) and psychoemotional (8.2 ± 0.2 points) disorders in perimenopausal women, while metabolic-endocrine disorders were most pronounced in postmenopausal women (5.3 ± 0.2 points). The total MMKIscore was most pronounced in women in the perimenopausal (31.6 ± 0.5) and postmenopausal women (31.7 ± 0.79), compared with women in the late reproductive period (P≤0.05).

Table 2.The severity of menopausal syndrome by severity, (abs, %)

and the total score of the MMKI, (M ± δ)

	1 group, n = 618		2 group, n = 627		3 group, n = 239	
	abs.	%	abs.	%	abs.	%
No Cs	52	8,4±1,1	52	8,3±1,1	11	4,6±1,4
With CS	566	91,6±1,1	575	91,7±1,1	228	95,4±1,4
CSI degree	426	68,9±1,9	355	56,6±2,0	142	59,4±3,2
CSII degree	133	21,5±1,7	212	33,8±1,9	83	34,7±3,1
CSIII degree	7	1,1±0,4	8	1,3±0,4	3	1,3±0,7
Overall score MMKI	28,1±0,44 ** *** (12-73)		31,6±0,46* (12-70)		31,7±0,79* (12-65)	
MODE	27		30		32	
MEDIAN	33		30		20	

*P≤0,05 compared to group 1

** P≤0,05 compared to group 2

*** P≤0,05 compared to group 3

****P≤0,05 compared to the general group

We conducted a comparative analysis of the indicators that make up the MS, depending on age (Table 3) and on the presence / absence of signs of CS (Table 4). The waist circumference (WC) on average in women 35-44 years old was 87.3 ± 0.8 cm, while in women the menopausal transition and postmenopause was significantly (P <0.05) higher and amounted to 90.6 ± 0.9 and 94 , 6 ± 1.4 cm, respectively. The frequency of women with WC>80 cm (criterion for women in the Asian region) was 69.7; 75.9% and significantly more often in postmenopausal women - 87%, respectively, in groups (Table 5).

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Table 3.The average values of MMS in women in the groups M ± δ

Indicators	I group, n = 618	II group, n = 627	III group, n = 239
WC, cm	87,33±0,80	90,55±0,85*	94,64±1,38* **
SBP, mmHg	121,3±3,2	130,6±4,1	138,1±3,0*
DBP, mmHg	73,5±3,3	83,3±3,9*	88,6±0,9 *
n=256	n=51	n=118	n=96
Cholesterol, mmol / l	4,96±0,11	5,45±0,08*	5,48±0,08*
TG, mmol / l	1,47±0,07	1,69±0,06*	1,62±0,07
HDL cholesterol, mmol/l	1,21±0,06	1,14±0,04	1,17±0,04
LDL cholesterol, mmol/l	3,11±0,10	3,48±0,08*	3,51±0,09*
VLDL, mmol / l	0,75±0,04	0,86±0,03*	0,79±0,04
AC, conventional. units	3,69±0,19	4,12±0,14	4,01±0,17
Glucose, mmol / l	4,71±0,33	5,55±0,19*	5,68±0,21*

*P≤0,05 the difference is significant compared with group I

** P≤0,05 in comparison with group II

The presence of CS significantly influenced the WC index - a progression of the severity of abdominal obesity was noted as the severity of the CS increased (Table 6). Thus, the WC in women with grade II and III CS was significantly higher - 91.8 ± 1.0 and 103.8 ± 4.5 cm compared with women without pathological menopause - 86.4 ± 2.2 cm. The frequency of abdominal obesity in women with CS was recorded significantly more often - from 74.1% with grade 1 CS to 87.5% - with severe, while without CS, a frequency of WC greater than 80 cm was observed in 68.4%.

Indicators of blood pressure increased with age and averaged: systolic blood pressure - from 121.3 ± 3.2 to 138.1 ± 3.0 mm Hg. and diastolic blood pressure - from 73.5 ± 3.3 to 88.6 ± 0.9 mm Hg. The frequency of women with blood pressure above 135/85 mm Hg also increased with age - from 20.6% to a significant increase in the frequency in the postmenopausal group of women to 47.3%.

Table 4.The average values of metabolic syndrome in women with and without CS, M ± δ

Indicators	CSI, n=923	CS II, n=428	CSIII, n=18	CS общая, n=1369	No CS, n=115
WC	88,71±0,67	91,75±1,02*	103,75±4,53*	90,0±0,56***	86,44±2,20**

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SBP	128,7±1,8	136,2±3,3*	144,0±8,2	132,4±2,2	118,3±3,0 * ** *** ****
DBP	78,5±3,0	92,5±1,3*	94,3±7,8*	85,2±1,9**	75,4±1,7** *** ****
n=256	n=112	n=83	n=13	n=208	n=57
Cholesterol, mmol / l	5,36±0,07	5,56±0,09	6,31±0,28* **	5,51±0,06***	4,68±0,08* ** *** ****
TG, mmol / l	1,65±0,05	1,74±0,08	1,71±0,16	1,68±0,04	1,36±0,07 ** *** ****
HDL cholesterol, mmol / l	1,14±0,03	1,11±0,05	1,15±0,08	1,13±0,03	1,21±0,04
LDL cholesterol, mmol / l	3,43±0,07	3,58±0,08	4,38±0,24* **	3,54±0,05***	2,81±0,08* ** *** ****
VLDL, mmol/l	0,82±0,02	0,87±0,04	0,86±0,06	0,84±0,02	0,66±0,03* ** *** ****
AC, conventional units	4,04±0,13	4,44±0,16	4,53±0,36	4,21±0,10	2,91±0,14* ** *** ****
Glucose, mmol/l	5,59±0,08	5,52±0,09	6,1±0,26**	5,79±0,06* **	4,43±0,05* ** *** ****

*P≤0,05 compared with the group of CS I

** P≤0,05 compared to the group of CS II

*** P≤0,05 compared to the CS III group

****P≤0,05 compared to the general CS group

Comparison of blood pressure in women with CS also showed a distinct increase depending on the severity of CS. The frequency of high blood pressure (above 135/85 mm Hg) as the degree of severity of the COP increased exponentially and amounted to 21.7% - with a mild severity of CS, 46.5 and 77.8% - with moderate severe climacteric disorders.

Determination of lipid fractions in blood serum showed an increase in average levels of cholesterol (from 4.96 to 5.68 mmol / L), TG (from 1.47 to 1.62 mmol / L), LDL (from 3.11 to 3.51 mmol / L), P <0.05), AC (from 3.69 to 4.1) and an unreliable decrease in HDL level (1.21 to 1.17 mmol / L) in the blood serum of women, depending on age. Starting from the perimenopausal age, there is a clear tendency to the development of dyslipidemia and its aggravation in postmenopausal women. An analysis of the incidence of dyslipidemia showed a significant (P <0.05) increase (almost twofold) in the number of women with elevated LDL (41.2% in late reproductive and 71.9% in postmenopausal women)

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and AC (31.4 and 57, 3%, respectively). The glycemic profile was represented by hyperglycemia in a small number of women (from 2 to 6.3% in groups) and impaired glucose tolerance (from 3.9 to 10.4%), while the average glycemia did not reach significant values - 6.1 mmol / l Another picture was noted in women with CS. Each 10 women (9.1%) with grade IICS had hyperglycemia, impaired glucose tolerance (IGT) was observed in every 6th (15.2%) and every fourth (23.1%) women with grade II and IIICS.

Table 5.The frequency of menopausal metabolic syndrome(MMS) and its components in women of various age groups, abs, %

Indicators	I group, n = 51		II group, n=118		III group, n = 96		General group, n = 265	
	abs	%	abs	%	abs	%	abs.	%
WC 80&↑	38	74,5±6,1	87	73,7±4,1	84	87,5±3,4**	209	78,9±2,5***
↑cholestero,mmol / l	26	51,0±7,0	77	65,3±4,4	60	62,5±4,9	163	61,5±3,0
↑TG,mmol/l	22	43,1±6,9	67	56,8±4,6	50	52,1±5,1	139	52,5±3,1
↓HDL cholesterol, mmol/l	14	27,5±6,2	33	27,9±4,1	30	31,3±4,7	77	29,1±2,8
↑LDL cholesterol, mmol / l	21	41,2±6,9	81	68,6±4,3*	69	71,9±4,6*	171	64,5±2,9*
↑VLDL	32	62,7±6,8	102	86,4±3,2*	67	69,8±4,7**	201	75,8±2,6**
↑AC	16	31,4±6,5	79	66,9±4,3*	55	57,3±5,0*	150	56,6±3,0*
dyslipidemia	16	31,4±6,5	40	33,9±4,4	27	28,1±4,6	83	31,3±2,8
↑Glycemia	1	2,0±1,9	4	3,4±1,7	6	6,3±2,5	11	4,2±1,2

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Disturbed IGT and diabetes	2	3,9±2,7	10	8,5±2,6	10	10,4±3.1	22	8,3±1,7
MMS	14	27,5±6,2	40	33,9±4,4	27	28,1±4,5	81	30,6±2,8
BMI 25&↑	36	70,6±6,4	84	71,2±4,2	78	81,3±4,0	198	74,7±2,7

*P≤0,05 the difference is significant compared with group I

** P≤0,05 in comparison with group II

***P≤0,05 in comparison with group III

Table 6.The frequency of MMS and its components in women with and without CS, abs, %

Indicators	КС I, n= 112		КС II, n=83		КС III, n=13		КС общая, n=208		No CS, n=57		OR
	abs	%	abs		abs	%	abs	%	abs	%	
WC80 см и ↑	83	74,1±4,1	75	90,4±3,2*	12	92,3±7,4*	170	81,7±2,7**	39	68,4±6,2** *** ****	2,1
↑cholesterol, mmol/l	70	62,5±4,6	59	71,1±4,9	12	92,3±7,4* **	141	67,8±3.2	22	38,6±6,4* ** *** ****	3,3
↑TG, mmol / l	56	50,0±4,7	48	57,8±5,4	8	61,5±13,5	112	53,8±3,5	27	47,4±6,6	1,3
↓HDL cholesterol, mmol/l	68	60,7±4,6	42	50,6±5,4	5	38,5±13,5	115	55,3±3,4	21	36,8±6,4* ****	2,1
↑LDL cholesterol, mmol/l	70	62,5±4,6	59	71,1±4,9	13	100* **	141	67,8±3,2***	28	49,1±6,6** *** ****	2,2
↑VLDL	86	76,8±4,0	60	72,3±4,9	11	84,6±10,0	157	75,5±3,0	44	77,2±5,6	0,9
↑AC	6	60,7±	5	67,5±5	1	84,6±10,	1	64,9±3,3	12	21,1±5,4	6

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	8	4,6	6	,1	1	0*	35			* ** *** ****	,9
dyslipidemia	24	21,4±3,9	44	53,0±5,4*	6	46,2±13,8	74	35,6±3,3* **	9	15,8±4,8** *** ****	2,9
↑Fasting Glycemia	2	1,8±1,3	8	9,6±3,2*	1	7,7±7,4	11	5,3±1,6	0	0	
Disturbed IGT and diabetes	5	4,5±1,9	12	14,5±3,8*	3	23,1±11,7	20	9,6±2,0	2	3,5±2,4** ****	2,9
MMS	23	20,5±3,8	46	55,4±5,4*	5	38,5±13,5	74	35,6±3,3* **	7	12,3±4,3** ****	3,9
BMI 25 & ↑	82	73,2±4,2	79	95,2±2,3*	13	100±0**	174	83,7±2,6* ** ***	24	42,1±6,5* ** *** ****	7,0

*P≤0,05 the difference is significant compared to CS I

** P≤0,05 compared to CS II

***P≤0,05 compared to CS III

****P≤0,05 compared to the CS group overall

Of the examined 256 women aged 35 to 70 years, MMS was observed in 81 (30.6%). The most vulnerable period was the menopausal transition - MMS was diagnosed in every third woman - in 40 (33.9%), while in women in the late reproductive period and postmenopause it was less common - in 14 (27.5%) and 27 (28.1%), respectively.

In the presence of the clinic KS, the chances of developing MMS increased almost 4 times. 74 out of 208 (35.6%) women with CS had MS, while in women without manifestations of CS it was registered almost 3 times less often - only 7 out of 57 (12.3%). Most often, MMS was diagnosed in women with moderate severity of COP - almost every second - 46 (55.4%), with grade I CS - in 23 (20.5%), and grade III CS - in 5 (38 ,5%).

IV. Discussion.

The analysis of the course of premenopausal, perimenopausal and postmenopause showed a significant influence of social factors on the development of pathological menopause. So, CS was noted significantly more often among residents of the city - 72.0 versus 54.8% who did not have a clinic of CS (OR = 2.1), women with higher education - 48.4 versus 33% (OR = 1.9). The protective factors for the development of the KS clinic are the absence of the fact of marriage - 1.5 versus 5.2% (OR = 0.3) and medical education - 69.6 against 79.1% (OR = 0.6), the latter, most likely, associated with access to health care and awareness.

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A significant factor in the development of CS with the formation of MMS is the presence of a history of somatic and gynecological diseases, such as the main components of MS - diabetes mellitus - 7.4 versus 0.9% (OR = 9.1), GB - 20.5 versus 10.4 % (OR = 2.2); as well as surgical menopause - 6.5 versus 0.9% (OR = 7.9), uterine fibroids - 12.3 versus 3.5% (OR = 3.9), overweight and obesity - 22.2 versus 26.8% (OR = 2.3). WC<80 cm is a protective factor in the development of CS (OR = 0.5). As the signs of CS progress, both the frequency and severity of the components of the MS increase, which proves the legality of the existence of MMS. The glycemic profile is aggravated as the severity of the COP, rather than increasing age. The most significant predictors of the development of MMS are overweight and obesity (BMI≥25), (OR = 7.0), and increased CA (OR = 6.9).

Timely identification of modifiable risk factors and early intervention is undeniably valuable due to the rapid development and accumulation of metabolic disorders, the high probability of missing the opportunity to conduct timely treatment and preventive measures in order to maintain health in adulthood and ensure a good level of quality of life in old age[16,17].

Particular attention should be paid to the criteria for CS and MS, which a general practitioner, as well as doctors of narrow specialties can detect in women, from 36-40 years:

- timely monitoring of the level of blood pressure and glucose in blood serum in order to avoid late diagnosis of important components of MS: GB and diabetes, since the syndrome-forming diseases in women developing during the perimenopause and included in the MMS are informative markers that allow diagnosing CS in the early stages of it development[8,10];

- weight control and when BMI is above 25 - dosed physical activity - 20 minutes / day or 3 times a week for 40 minutes (every other day);

- control of the WC indicator no more than 81 cm, because there is "metabolic obesity with normal body weight" [18–20];

- regular examination - ultrasound examination of the pelvic organs - to avoid late diagnosis of uterine fibroids;

- monitoring the level of lipid fractions in serum; - timely detection and correction of dyslipidemia.

V. Findings

A premorbid background for the development of the pathological course of menopause is a burdened somatic and obstetric-gynecological history. An earlier onset of menopause (46.7 ± 0.2 years) in women in this region was determined, in contrast to global data (50 ± 2 years)[21–23]. The issue of premature and early onset of menopause in almost one in ten women in the region remains relevant. The presence of MS indicators significantly aggravates the course of menopause, causing high comorbidity and the development of the clinic CS.

All of the above measures will prevent and timely diagnose CS and MMS at the preclinical stage, which will reduce the appeal of women to doctors of various specialties (cardiologists, endocrinologists, gynecologists, etc.) and receive adequate assistance from a general practitioner and an obstetrician-gynecologist on an outpatient basis. phase of medical care.

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VI. Conclusion

The presence of MS indicators significantly aggravates the course of menopause, causing high comorbidity and the development of the clinic of CS. The analysis showed that an increase in the waist circumference index is directly proportional to an increase in the severity of menopausal syndrome. In addition, the frequency of women with blood pressure above 135/85 mm Hg also increases with age and is especially evident in the postmenopausal group of women. Also, with the transition from perimenopausal age in women to postmenopause, there is a clear tendency to the development of dyslipidemia and its exacerbation. If the clinic of women has menopausal syndrome, the likelihood of developing menstrual metabolic syndrome increased almost 4 times.

Author Contributions: Kayumova Dilrabo Talmasovna and Abdullaev Bekhzod Shukhratovich had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis; acquisition of data; interpretation of data; drafting of the manuscript; statistical analysis. I have seen and approved the final version.

Declarations of interest:none

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CS - Climacteric Syndrome
MS - Metabolic Syndrome
MMS – Menopausal Metabolic Syndrome
AI – Atherogenic Index
KI – Kupperman Index
ATP III - Adult Treatment Panel III
DM - Diabetes Mellitus
AH - Arterial Hypertension
MMKI - Modified Menopausal Kupperman Index
TG - Triglycerides
HDL - High Density Lipoproteins
LDL - Low Density Lipoproteins
VLDL - Very Low Density Lipoproteins
TCh – Total Cholesterol
IDF - International Diabetes Federation
NCEP - The National Cholesterol Education Program
WC - Waist Circumference
IGT - Impaired Glucose Tolerance
COP – Colloid Osmotic Pressure
SBP – Systolic Blood Pressure
DBP – Diastolic Blood Pressure

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