CALCIUM AND VITAMIN D INTAKE BY PERIMENOPAUSAL WOMEN WITH ARTERIAL HYPERTENSION

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Keywords: *calcium, Vitamin D, perimenopausal women*

Objectives. At present there is a number of studies indicating the associations between Calcium(Ca), Vitamin D metabolism and arterial hypertension (AH), especially during perimenopausal period.

Aim. To estimate dietary Ca and Vitamin D intake and the value of their concentration in blood plasma of perimenopausal women with AH II degree.

Materials and methods. 95 women have been examined (average age 48.4±5.3 years). They were divided into 2 groups. Group I included 35 women without AH, group II – 60 women with AH II degree. To assess Ca and Vitamin D intake the actual three days' diet was analyzed and the calculation was made by the

computer system “Dietary intake test” (Kiev, Ukraine). The level of Vitamin D (25(OH)D3) in blood plasma was estimated by chemiluminescent method in 21 women from group I and in 32 women from group II. The level of 25(OH)D3 of lower than 50 nmol/L was considered Vitamin D deficiency, while that of 51-75 nmol/L was considered insufficient. The level above 75 nmol/L was proposed optimal. The statistical processing was performed by means of «STATISTICA 7.0».

Results. The examined women from groups I and II varied significantly with their weight (71.5±10.5kg versus 85 [73;95]kg, *p=0,007*), in body mass index (26.4±3.6 kg/m^2 versus 31.5±6.1 kg/m^2, *p=0.009*) and in the level of systolic blood pressure (120 [110;125] mmHg versus 160 [150;160] mmHg, *p=0.00001*) and that of diastolic blood pressure (80 [70;80] mmHg versus 100 [92.5;100] mmHg, *p=0.0004*).

The examined groups did not vary with average intake of Ca (561.6 ± 176.5mg/day in group I and 525.9±231.7 mg/day in group II) and Vitamin D (0.4[0.16; 1.56] mg/day in group I and 0.26[0.1;2.09] mg/day in group II). Only 5.7% women in group I and 3.3% women in group II consumed 1000-1300 mg Ca daily. The incidence of calcium consumption of less than 500 mg/day was 1.4-fold higher in group II than in group I. Only 8.6% women from group I and 6.7% women from group II consumed 5 µg/day (200 IU) of Vitamin D, and it was the minimum daily intake of Vitamin D.

The concentration of 25(OH)D3 in blood plasma was higher (*p=0.02*) in group I (43.5±17.8 nmol/L versus 32.5±18.1 nmol/L, respectively). 25(OH)D3 deficiency was revealed in 61.9% women from group I and in 84.4% women from group II. Insufficiency was in 33.3% women from group I and in 12.5% women from group II. We determined the correlation between 25(OH)D3 concentration in blood plasma and the level of systolic blood pressure (r=-0.61; *p<0.05*), height (R=0.36; *p<0.05*), between Ca intake and that of Vitamin D (R=0.40; *p<0.05*) in group II.

Conclusions. The absolute majority of perimenopausal women with AH II degree consume inadequate amount of Ca and Vitamin D daily. Vitamin D deficiency was revealed in 61.9% perimenopausal women without AH and in 84.4% perimenopausal women with AH II degree.

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PRZYJMOWANIE WAPNIA I WITAMINY D PRZEZ KOBIETY W WIEKU OKOŁOMENOPAUZALNYM Z NADCIŚNIENIEM TĘTNICZYM

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Słowa kluczowe: *wapń, witamina D, kobiety w wieku okołomenopauzalnym*