



P6. MENOPAUSAL UTERUS VOLUME CORRELATES WITH VITAMIN D LEVEL, DEPENDING ON THE SEASON AND THE CONDITION OF THE UTERUS.

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Context:

By cessation of ovarian function uterine volume usually decreases. However, differences between individuals can be observed. Uterine leiomyomas usually regress after menopause. They are smaller and fewer, but their postmenopausal incidence is the same.

Objective:

To investigate which of tested parameters correlate with the uterus volume after the end of the fertile period. Further to determine, if there is a difference depending on the presence or absence of leiomyomas.

Object: 186 middleeuropean women, least 6 months after the last menstrual bleeding; 108 of them with an ultrasonically verified presence of uterine leiomyoma.

Methodology:

Retrospective analysis. Tested parameters were: age, body mass index (BMI), weight, winter (november-april) or summer (may-october) 25-hydroxyvitamin D3 (vitamin D3) serum level. Obtained data were tested by binary logistic regression, in three ways:

- A. postmenopausal women as a whole, regardless of the presence of myomas (n 186);
- B. postmenopausal women with ultrasound-verified uterine myoma (n 108);
- C. postmenopausal women without uterine leiomyoma (n 78).

Results: The uterine volume decreased with the age in all groups ($p < 0.001$).

A) The uterine volume was significantly affected by weight of women ($p = 0.005$) and BMI ($p = 0.062$). The effect of the other parameters has not been confirmed.

B) Postmenopausal women with myoma (n 108): The uterine volume inversely correlated with "winter" vitamin D3 ($p = 0.005$) The summer season vitamin D3 level and other tested parameters did not significantly affect volume of myomatous menopausal uterus.

C) Postmenopausal women without uterine leiomyoma (n 78): Uterine volume was reduced according to the summer level of vitamin D3 ($p = 0.059$).

Conclusion: It has already been documented that vitamin D3 inhibits the growth of both myometrium and leiomyomas in vitro, depending on the concentration.

We have proved that: 1; Volume of the myomatous uterus after menopause decreases with serum

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vitamin D3 level in the winter season. 2; Volume of the intact menopausal uterus was on the other hand more affected by the summer level of vitamin D3. We assume that this discrepancy between groups could be mainly due to eating habits in winter and a different lifestyle in the summer months. 3; Postmenopausal women with fibroids were generally heavier, with higher mean BMI than those with intact uterus. 4; Uterine volume was decreased with age in all tested subgroups.