



## P36. UTERINE VOLUME IN MENOPAUSE CORRELATES EITHER WITH MPV OR WITH CRP & NEUTROPHIL COUNT, DEPENDING ON THE PRESENCE OF LEIOMYOMAS.

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### Context:

The size of the uterus varies in the course of life, especially depending on the level of estrogens. However, the individual differences in its volume exist also after the cessation of ovarian activity. Uterine leiomyomas are characterised by extracellular matrix production with altered structure. They usually regress after menopause, but their postmenopausal incidence remains the same.

### Objective:

Investigate if there are some changes in blood parameters, correlating with the female uterus volume after fertile period.

Object: 186 middleeuropean women, least 6 months after the last menstrual bleeding; 108 of them with uterine leiomyoma verified by ultrasound examination.

### Methodology:

Retrospective analysis. Tested parameters of blood count: Hemoglobin, Erythrocyte count, Mean corpuscular volume (MCV), Platelet count, Mean Platelet Volume (MPV), White blood cell count (WBC), absolute Neutrophil count and hs-C-reactive protein (CRP) serum level. The data obtained from the health records were tested by binary logistic regression, in triple way:

- 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:

A). In menopausal women as a whole the uterine volume was affected only by MPV ( $p=0.066$ ). The effect of the other parameters has not been confirmed.

B). Postmenopausal women with myoma (n 108): The uterine volume was increased with absolute Neutrophil count ( $p=0.046$ ), but inversely correlated with CRP serum level ( $p=0.030$ ). The other tested parameters did not affect the uterine volume at this condition.

C). In group with intact uterus a significant positive correlation between uterine volume and MPV ( $p=0.023$ ) was observed.

### Conclusion:

Several studies have shown correlation of MPV, CRP or WBC with arterial stiffness and atherosclerosis.

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Observed relation of uterine size to markers of inflammation leads to a hypothesis about the possible share of subclinical inflammation, trauma, edema (B) and uterine atrophy, in relation to the presence of atherosclerosis (A,C). Uterus is not an isolated organ, but communication takes place in the information network of the body. Based on the results, it can be assumed that leiomyomas are manifested not just by local myometrium changes. Besides their presence may interfere with the body homeostasis, even after the end of fertile period.