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## CHANGES IN PERIPHERAL BLOOD INDICATORS AND HEMOSTATIC SYSTEM IN PATIENTS WITH UTERINE FIBROIDS

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### Abstract

The article presents the results of studying the parameters of peripheral blood and the system of coagulation of patients with uterine fibroids. The analyzed data indicate the presence of a pronounced chronic inflammatory process, which is confirmed by the relevant indicators. The obtained results correlate with the data obtained by other authors. Since in the course of preliminary studies, the expediency of using the buccal epithelium to confirm the diagnosis of "uterine fibroids" has been determined, the blood system parameters have been confirmed once again confirm the high-visibility of this technique.

**Keywords: uterine fibroid, hemostasis, peripheral blood, coagulation.**

**Introduction.** Uterine fibroid is a benign tumor characterized by immature myocyte growth of the vascular wall. It's the most common disease among women of reproductive age and is 10 to 30%. Among women with primary uterine fibroids first inspection appears from 1 to 5% of subjects, including gynecologic patients and 35% [8]. Most often, this pathology occurs in women older than 35 years, the peak incidence is coming 35 - 45 years [6, 7].

Modern understanding of the etiology and pathogenesis of uterine myoma is based on the achievements of cytogenetics, molecular biology, endocrinology, immunology, areas intercellular interactions [9, 10].

Today there are a large number of clinical laboratory and instrumental methods of diagnosis of uterine myoma. However, according to recent published data focusing on research buccal epithelium with uterine cancer because it has several advantages due to the fact that there is non-invasive, and is characterized by a highly convenient collection of material [11]. We conducted a study confirming the feasibility of implementing this method as diagnostic criterion gynecological pathologies, including uterine fibroids.

To confirm the feasibility of this method is the aim of our study was to investigate changes in peripheral blood and coagulation system in patients with uterine fibroids.

**Materials and methods.** The study was conducted in 80 patients with uterine cancer patients. The data was compared with standard parameters as follows: in cases where the patient's been mentioned a particular index in the normal range, it took the unit. If the index was above or below the normal value, found the percentage increase (or decrease) in respect of the normal value.

Blood sampling was performed in the morning on an empty stomach. To study hemostasis was used citrate plasma poor in platelets and citrate plasma rich in platelets. Citrate plasma rich in platelets was obtained by centrifugation of citrate stabilized blood (blood + 3.8% sodium citrate at a ratio of 1: 9) at 1000 - 1500 rpm for 5 - 7 minutes. Citrate plasma poor in platelets was treated by double centrifugation: first receiving plasma rich in platelets, and then again centrifuged for 15 - 20 min at 4 ° C at 3000 - 4500 rpm. [1].

The study included peripheral blood definition: hemoglobin, color index, hematocrit, number of erythrocytes and leukocytes, ESR, leukocyte formula according to generally accepted methodological recommendations [5].

Definition of indicators characterizing the coagulation system was carried out according to methodical recommendations Z.S. Barkagan [2]. For a detailed assessment of hyper- or hypocoagulation was used a large number of hemostasis criteria for correct assessment of each part of complex enzymatic process: platelet count, activated partial thromboplastin time (APTT), prothrombin index, thrombin time, international normal ratio (INR), fibrinogen, time recalcification soluble fibrin monomer complex (RFMK), tolerance to heparin [1].

Since in this case the observation contains significant amounts of the same values was used nonparametric statistical criteria adjusted for continuity. [4]

**Results and discussion.** The results of research of peripheral blood and coagulation system are shown in the table. The largest deviation of all parameters is hemoglobin. In 26.25% of cases the deviation of the index in any direction relative to the norm, while in 17.5% of patients is observed shifts to a lower side, and at 8.75% - a higher (Table.).

Table

**Changes in peripheral blood and hemostasis system in patients with uterine fibroids**

Indicators	% of patients with deviation indicator in any direction relative to the norm	% of patients with a lower rejection rate from the normal side	% Of patients with a larger deviation of the norm side
Hemoglobin	26,25	17,5	8,75
Hematocrit	0	0	0
Red blood cells	21,25	17,5*	3,75
Color index	2,5	2,5	0
White blood cells	10	3,75	6,25
Stab neutrophils	7,5	0	7,5
Segmented neutrophils	0	0	0
Eosinophils	1,25	0	1,25
Lymphocytes	10	6,25	3,75
ESR	7,5	1,25	6,25
Prothrombin index	0	0	0
Fibrinogen	10	1,25	8,75
RFMC	2,5	0	2,5
Recalcification time	0	0	0
MHC	0	0	0
APTT	2,5	2,5	0
Thrombine time	1,25	0	1,25
Thrombocytes	2,5	1,25	1,25
Tolerance to heparin	0	0	0

Indicator erythrocytes also greatly cases (21, 25%) goes beyond the norm, while more often (17.5%) it decreased than increased (in 3.75% of cases). Thus, statistically significant value of this index is shifted downward relative to standards (as an indicator of hemoglobin).

Unlike indicators red blood cells, leukocytes and content changes in leukocyte formula was not significant deviation relative to normal (10% of cases), often upwards of the figure (in 6.25%). In particular, increased 7.5% in the number of cases of band neutrophils; decreases (in 6.25% of cases) lymphocytes.

Indicator ESR often been raised (in 6.25% of cases), but this aspect was observed in a small number of cases.

Regarding the indicators that characterize the hemostatic system found that fibrinogen content was more increased (to 8.75%) and generally deviated from the norm only 10%. Changes of other indicators showed changes in all phases hemocoagulation not observed.

The data correlate with the results by other researchers and confirm the presence of chronic inflammation that is characteristic clinical symptoms of uterine myoma [3, 6, 7].

### **Conclusions:**

1. The analysis of peripheral blood and hemostasis system indicate the presence of the inflammatory process in patients with uterine myoma.
2. The results obtained confirm the diagnosis and enable further study using patients as a diagnostic criterion buccal epithelium.

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