



**Fig.2.** Binuclear or «kissing» nuclei in cervix smear for papillomavirus infection (conventional smear) (a) and koilocyte for liquid-based cytology (staining method by Romanovsky-Gimza), x400 (b) negative cases were identified in the di- of the reproductive organs from preven-

agnosis by LSIL, which indicates the beginning of a viral lesion or other causes

of dysplasia.

Thus, the diagnostic value of liquid-based cytology method in the diagnosis of cervical pathology is generally higher compared to the traditional method. The LBC method is more informative and can be used as an independent screening method for detecting cervical disease. Liquid-based cytology method in cervical cancer screening supplemented by a molecular method of virus detection (HPV testing) will enable to reveal the initial, precancerous stages and specific treatment in time.

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## OPTIMIZATION OF AUTOPLASMA DONATION DURING PREGNANCY

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#### **ABSTRACT**

The article reflects the experience of autoplasma donation in pregnant women with threat of massive bleeding in the period from 2016 to 2018. Analysis of the statistics of massive bleeding according to the diagnosis is presented. According to the analysis, pathologies of pregnancy, related with the greatest risk of massive bleeding were identified. We also optimized the management of autoplasma donation in these groups of pregnant women.

Keywords: autoplasma donation, massive bleeding, obstetrics.



Introduction. Massive bleeding with the loss of more than 30% of the blood volume remains one of the most frequent causes of maternal mortality around the world [1, 6, 7].

When massive bleeding occurs, one of the main part of the treatment is transfusion therapy, which is accompanied by number of immune and non-immune complications [4].

Due to blood-saving technologies it is possible to avoid reactions and complications during transfusion therapy in massive bleeding. One of the methods is donation of autoplasma, which consists of preparing patient's own plasma with further autologous transfusion. The advantages of autoplasma transfusion are: no risk of post-transfusion reactions, complications, blood-transmissible infections, no danger of alloimmunization [2.

Optimization of autoplasma donation in pregnancy is a significant part of successful treatment of massive bleeding in obstetrics.

Objective of research: optimization of autoplasma donation in pregnancy. Reducing the number of reactions and complications during transfusion therapy in the treatment of massive hemorrhage

in obstetrics.

Materials and methods of research. During the period from 2016-2018 in "Perinatal center" of Khabarovskii krai autoplasma preparation was made among 216 patients with various diagnoses. 2016 - 119 patients, 2017 - 63 patients, 2018 (10 months) - 34 patients. Detailed list is presented in Table.

Preparation of autoplasma was made in the period of 32-37 weeks of pregnancy in patients threatened by massive bleeding (the list of patients threatened by massive bleeding is presented in the Guidelines "Prevention, treatment and algorithm of management in obstetric bleeding" [6]). The preparation of autoplasma was performed by the method of plasmapheresis in the department of extracorporeal hemocorrection methods. One donation was about 400 - 600 ml, depending on the patient's weight and the tolerance of the procedure itself (hemodynamic reactions to blood sampling).

Tests complex before the procedure included: testing for HIV-1 / HIV-2, RW, hepatitis B and C; hemostasiogram; blood group, Rh factor; clinical blood test; total blood protein, ALT, AST.

Also all the patients filled a form about

2018

2017

their attitude to autoplasma donation and autoreinfusion of red blood cells.

After the plasmapheresis, all patients underwent the replacement of the lost plasma volume with crystalloid solutions in a 1: 1.5 ratio.

Results and discussion. The analysis of the obtained data revealed that 15 out of 216 patients who donated autoplasma, occurred massive blood loss during C-section, pathological blood loss (more than 1000 ml, but less than 30% of the circulating blood volume) - in 18. It should be noted, that all patients underwent a cesarean section; no significant blood loss was observed during independent delivery.

Analyzing the diagnoses of patients with massive blood loss, it was noted that all cases fit into two diagnoses: placenta increta - 11 (2016 - 3, 2017 - 4, 2018 - 4) and the full variant of placenta previa - 4 (2016 - 2, 2017 - 0, 2018 - 2). In patients with pathological blood loss, only one diagnosis was observed: the full variant of placenta previa - 18 (2016 - 7, 2017 - 6, 2018 - 5).

It was also revealed that the average level of fibrinogen in patients who underwent autoplasma donation was 3.23 g / I (2.7 - 5.6).

Out of the 216 cases, autoplasma was utilized in 39% of cases (Lack of demand ) (2016 - 26, 2017 - 12, 2018 - 1).

Conclusion. According to the analysis of the results, we were able to draw the following conclusions:

- According to the European guidelines for the management of massive hemorrhage [8], an effective starting dose of the freshly frozen plasma in the treatment of massive blood loss is 10-15 ml / kg of body weight. But this dose should be doubled if coagulopathy was developed. Thus, autoplasma donation in pregnant women of high risk should be done in doses of 10-15 ml / kg. However in the case of patients whose risk of massive hemorrhage is definitely 100% (i.e placenta increta), we consider appropriate to double the autoplasma donation dose in the absence of contraindications.
- The average level of fibrinogen in autoplasma donors was 3.23. Due to the fact that this test is not routinely held at blood transfusion departments, it is impossible to say in which cases the level of fibrinogen in donors' fresh frozen plasma reaches the normal level, and, in particular, the level observed among women in the third trimester of pregnancy. This fact indicates the high efficiency of autoplasma, thus the average level of fibrinogen in pregnant women' autoplasma is clearly higher than the average normal rates and never approaches the lower limit of normal.
  - 3. According to our data, massive

#### Frequency of donation and utilization of autoplasma due to lack of demand, depending on the diagnosis, n (%)

2016

Diagnosis	2016		2017		2018	
	Prepared	Utilized	Prepared	Utilized	Prepared	Utilized
Placenta increta	3	0	3	0	4	0
Full variant of placenta previa	13 (100)	2 (15,4)	17 (100)	1 (5,88)	17	0
Marginal variant of placenta previa	18 (100)	5 (27,7)	3 (100)	2 (66,6)	4	0
Triplets	1	0	0	0	1	0
Twins	6 (100)	1 (16,6)	3 (100)	1 (33,3)	1	0
Insolvent scar after 1 C-section	22 (100)	3 (13,6)	14 (100)	2 (14,3)	0	0
Insolvent scar after 2 C-sections	34 (100)	5 (14,7)	13 (100)	2 (15,3)	3	0
Insolvent scar after 3 C-sections	8 (100)	2 (25)	6 (100)	2 (33,3)	2	0
Insolvent scar after 4 C-sections	2 (100)	2 (100)	0	0	0	0
Uterine myoma	7 (100)	3 (42,8)	0	0	1	0
Hypotonic bleeding in anamnesis	0	0	1	0	0	0
Big fetus	0	0	2 (100)	1 (50)	0	0
Menier disease	0	0	1 (100)	1 (100)	0	0
Pregnancy induced arterial hypertension. Osteochondrosis of lumbar area	1	0	0	0	0	0
Compound ob-gyn anamnesis	2 (100)	2 (100)	0	0	0	0
Suspicion of placenta previa	1 (100)	1 (100)	0	0	1 (100)	1 (100)
Overall	119 (100)	26 (21,84)	63 (100)	12 (19)	34 (100)	1 (2,94)

bleeding was observed only in patients with placenta increta (100% cases) and full variant of placenta previa (8.3% of cases), pathological blood loss was observed only in patients with full placenta previa (37.5%). In other cases, blood loss was insignificant and did not require autoplasma replacement transfusion, as a result of which the plasma had to be utilized

Based on the above, we believe that the donation of autoplasma is appropriate in patients with diagnoses such as: placenta increta and the full variant of the placenta previa. According to previously calculated statistics in the Perinatal Center of Khabarovsk, among 27 patients who underwent surgeries from 2016 to 2018 (6 months), with placenta increta, massive bleeding was observed in 100% of cases [3]. This fact confirms that autoplasma donation is a necessary part for preparation before the cesarean section. In other cases, autoplasma donation is impractical.

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# RATIONAL METHODS OF DIAGNOSTICS OF CHRONIC ENDOMETRITIS TYPES AFTER PREGNANCY TERMINATION AMONG WOMEN WITH CHRONIC PYELONEPHRITIS AND ANEMIA

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#### **ABSTRACT**

The article shows different effectiveness of endometrial evaluation methods among women with pregnancy termination on the background of CP and anemia, their complementarity in the allocation of CE types – a proven cause of early reproductive losses. Clear connection is obvious between the lack of pregravid preparation on the background of chronic EGD and high CE frequency, the diagnosis and the treatment of which at the pre-grading stage seem to be the best tactics for the prevention of various degrees of violations of the "fetal-endometrial" interaction.

Objective of the research: to evaluate the effectiveness of the diagnostic stage in the management of women after abortion on the background of chronic pyelonephritis (CP) and anemia.

Materials and methods of the research: A group of 431 women with terminated pregnancy due to anemia (n=246) and CP (n=185) was prospectively examined.

**Research methods:** clinical and statistical analysis, sonography, hysteroscopy, pathomorphological examination of the biopsy of the uterine mucosa/removed material with visually obvious pathology and/or revealed by sonography.

**Results of the research:** The effectiveness of diagnosing chronic endometritis types (hypoplastic and hyperplastic) with hysteroscopy is shown and confirmed morphologically – with the allocation of characteristic features, typical of each group.

Indicators of sensitivity and specificity of methods for diagnosing the hyperplastic type (92.6% and 66.7% - sonography, 97.5% and 77.2% - hysteroscopy) were higher than with the hypoplastic one (79.2% and 68.6% - sonography, 89.6% and 74.4% -hysteroscopy). The histological verification of the CE (chronic endometritis) pattern took place in 83.5%, with a greater frequency of the hypoplastic variant in CP (50.3% versus 24.8% in anemia) (p <0.05) and hyperplastic - in half of the samples with anemia - one and a half times more often (p <0.05). The amount of samples with an "incomplete" CE morphological picture in the EGD (extragenital diseases) group was 39.2%.

Detailing of endometrial histological studies in a group of women with pregnancy termination on the EGD background showed the presence of