7. Skvorcova V.I., Limborskaya S.A., Levickij G.N. Sovremennye predstavleniya ob ehtiologii, patogeneze i lechenii bolezni dvigatel'nogo nejrona [Modern ideas about the etiology, pathogenesis and treatment of motor neuron disease] Zhurn. nevrologii i psihiatrii im. S.S. Korsakova [S.S. Korsakov J. neurology and psychiatry]. Moscow, 2005, № 1, p. 4-12.

8. Amato A.A., Prior T.W., Barohn R.J. [et al.] Kennedy' s disease: a clinicopathologic correlation with mutations in androgen receptor gene. J. Neurology, 1993; 43: 791-794.

9. Mamede de C., Swash Michael. Can selection of rapidly progressing patients shorten clinical trials in amyotrophic lateral sclerosis? Archives of neurology, 2006; Vol. 63, N 4: 557-560.

10. Shipe C., Zivkovic S.A. Electrodiagnostic evaluation of motor neuron disorders. Am J. END Technol 2004; 44: 30-36.

11. Kim W.K., Liu X., Sandner J. [et al.] Study of 962 patients indicates progressive muscular atrophy is a form of ALS. J. Neurology 2009; Nov 17; 73 (20):1686-92.

12. Word Federation of Neurology Research Group on Neuromuscular Deseases: Classification of 1994 Neuromuscular disorders. J. Neurol. Sci., 1994; 124: 109-1302.

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PHARMACOLOGICAL AND SURGICAL TERMINATION OF MISSED ABORTION IN THE FIRST TRIMESTER AT THE DEPARTMENT OF GYNECOLOGY №1 OF THE SBI RS (YA) YAKUTSK CITY CLINICAL HOSPITAL

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ABSTRACT

This article demonstrates the advantages of pharmacological medical termination of missed abortion. It presents an analysis of women's experiences of pharmacological and surgical terminal of missed abortion based on material from the Department of Gynecology №1of the SBI RS (Ya) "Yakutsk City Clinical Hospital (YCCH)". The study included only patients with normal hemostatic system parameters. Patients with MA who have contraindications to the use of Mifepristone and Misoprostol were also not included in the group. The comparison group included 69 patients with MA, who underwent a surgical method of emptying the uterine cavity by vacuum aspiration. All patients were under observation in the gynecological department of the YCCH. To establish the diagnosis of MA a female pelvic ultrasound scan was performed using a vaginal sensor. The ultrasound control diagnosis was performed on the 14th day after taking Misoprostol and the vacuum aspiration.

The complications and treatment options are presented.

Keywords: embryo, anembryonic gestation, missed abortion, endometritis, pharmacological termination of missed abortion, vacuum aspiration, mifepristone, misoprostol, removal of embryo or fetus, hematometra.

Introduction. A missed abortion (MA), also known as a missed miscarriage or a silent miscarriage, is a pathology, in which for some reason the embryo (or fetus) ceases to develop and dies. The missed miscarriage takes a dominant position in the prevalence of reproductive losses.The incidence of MA is about 16-18% among pregnant women, and in the non-carrying prevalence of pregnancy, it reaches 45-88.6% of the number of spontaneous miscarriages at early stages. Endocrine dysfunctions, chromosomal abnormalities, different sexually transmitted infections, an insufficient amount of progesterone or an excess of androgens may lead to this pathology. Antiphospholipid syndrome can often be the cause of embryonic death when clots form inside blood vessels. Moreover, the reasons for embryonic death could be toxic effects from radiation, alcohol and illegal drugs consumption, smoking. The International Federation of Gynecology and Obstetrics adopted a scientific concensus, according to which each case of MA is associated with chronic endometritis (XVIII FIGO Congress of Gynecology and Obstetrics: Kuala Lumpur, Malaysia, 2006). In chronic endometritis an endometrial lesion is accompanied by the development of receptor deficiency, the sensitivity of the mucous membrane of the uterus (endometrium) to steroids decreases, and the deficiency of cyclic transformations of the endometrium is marked. This may lead to the disruption of implantation processes and, as a consequence, to MA.

In most cases the interruption of MA occurs independently, without any intervention in the uterine cavity, which reduces the risk of surgical, anesthetic, infectious inflammatory complications and reduces the psychogenic trauma for the patient [5]. Frequently, however, there is fetal egg retention and the question emerges about the most moderate way of eliminating it from the uterus. It has now been proven that the surgical method of emptying the uterine cavity during the MA is dangerous, since it facilitates to additional traumatization of the endometrium, which can complicate the achievement and the course of a subse-

quent pregnancy.

Consequently, according to current recommendations, it is necessary to use alternative options, the least traumatic of which is the pharmacological medical termination of MA. This method has several advantages: it does not require surgery and there is a natural restoration of the menstrual function after 28-30 days.

For the pharmacological termination of MA, antigestagens are used in combination with prostaglandins [1-3, 5]. The newest way to terminate pregnancy without surgery is the pharmacological (non-surgical) abortion, also known as a "velvet" abortion, by using Mifepristone. Mifepristone is a steroidal antiprogestogen. Mifepristone followed by a prostaglandin analog is the most typical method of medication used for medical abortion recommended by WHO. By blocking the action of progesterone, mifepristone alters the endometrium (the uterine lining), induces bleeding, and causes the uterine lining to shed. Mifepristone is used in conjunction with misoprostol. By interacting with prostaglandin receptors, misoprostol causes the cervix to soften and the uterus to contract, resulting in the expulsion of the uterine contents. If necessary, misoprostol can be repeated after 3 hours. This is the most effective and safe combination of medicaments [4]. In the absence of pharmaceutical effect, according to actual positions, vacuum aspiration is required, which has advantages over curettage in terms of safety [3].

Mifepristone must be taken in the presence of the prescribing physician. The Mifepristone pill should be 200 mg. The medication is then followed with 400 to 800 micrograms of misoprostol 36-48 hours later and must be taken in the presence of the doctor. Several to fifteen days later, the patient confirms that the abortion is complete. Medical ultrasound will confirm the completion. If the abortion is not complete, the clinician will perform a vacuum aspiration to empty the uterus.

Purpose of the study: to conduct a retrospective comparative analysis of pharmacological and surgical termination in the case of missed abortion at the first trimester of pregnancy, to identify the causes and evaluate the incidence of complications.

Materials and methods of the research. There has been conducted the analysis of pharmacological and surgical termination of missed abortion in a period of up to 12 weeks of gestation in 576 patients who applied to the gynecological department of the Yakutsk City Clinical Hospital in 2017.

507 women in whom the pregnancy was interrupted with the help of pharmacological agents composed the main group. One reason why patients might not use Mifepristone and Misoprostol for the purpose of interrupting MA was the risk of coagulopathic bleeding [2]. The study included only patients with normal hemostatic system parameters. Patients with MA who have contraindications to the use of Mifepristone and Misoprostol were also not included in the group. The comparison group included 69 patients with MA, who underwent a surgical method of emptying the uterine cavity by vacuum aspiration. All patients were under observation in the gynecological department of the YCCH. To establish the diagnosis of MA a female pelvic ultrasound scan was performed using a vaginal sensor. The ultrasound control diagnosis was performed on the 14th day after taking Misoprostol and the vacuum aspiration.

Results and discussion. Of 576 patients with MA in 486 (84%) cases the pregnancy proceeded according to the type embryonic death, in 90 (16%) by the type of anembrionyc gestation.

544 pregnant women (94%) are residents of the city, 32 (6%) are from the village. By nationality, the Yakuts predominated being 369 (64%) patients, 127 are Russians (22%), 80 from other nationalities (14%).

The age of patients in the main group ranged from 18 to 41 years with an average value of 28 ± 6.5 years and corresponded to the indicators in the comparison group. Of bad habits, smoking predominated, being 78%, and this is 396 pregnant women of the main group, and 75% - 52 patients of the comparison group. The number of female pelvic inflammatory diseases in the anamnesis, such as salpingoophoritis, chronic endometritis, cervicitis in both groups did not differ significantly and consisted of 242 patients - 42%. For 235 patients, with a missed miscarriage in the anamnesis, early spontaneous miscarriages followed by dilation and curettage and abortion, was 47%.

The patients hospitalized by pharmacological termination of MA at a period of 6-8 weeks of gestation were 321 (64%), with a period of 9-10 weeks, were 111 (21%), for 10-12 weeks, were 86 (15%). Surgical method of termination of MA was applied in 48 pregnant women with a period of 7-8 weeks, which was 70%, with a period of 9-10 weeks of gestation in 18 patients was 25%, with a period of 11-12 weeks 3 - 5%. In the main group of patients who received Mifepristone at a dose of 200 mg, there were minor side effects in the form of nausea, headache for 21 (4%) pregnant women.

The embryo expulsion after taking Misoprostol in 306 patients (61%) occurred within 4-6 hours, with a gestation period of 6-9 weeks; after 2 days in 66 patients (13%), for the remaining 135 (27%) pregnant women after 3-4 days. An additional dose of the drug was required in 5 cases (5%).

For the patients of the main group, after medical cleaning of the uterus cavity, complications occurred in 31 (6%) cases, such as hematometra, presence of embryonic remains, excessive bleeding. All these patients underwent vacuum aspiration of the uterine cavity with hemostatic purpose, embryo scrap and blood clots from the uterine cavity were removed. From the anamnesis it was found out that 5 (1%) women had repeated missed miscarriage, repeated induced miscarriage by curettage of the uterine cavity more than once for 26 (7%) patients. Probably the previous damage to the receptor apparatus caused the MA and evolved to chronic endometritis, which led to these complications.

In the comparison group, complications were observed in 12-17% of patients, hematometra in 5 (7.5%) cases, endometritis in 5 (7.5%), embryonic remains in 2 (2%), and this is twice more often than with pharmacological cleaning of the uterine cavity. Women, who had curettage of uterine cavity, got complications such as hematometra and embryonic remains. In this cases, a repeated vacuum aspiration of the uterine cavity was performed.

Conclusion. The probable causes of the arisen MA were artificial abortion and spontaneous abortion with subsequent curettage of the uterine cavity, which most likely led to autoimmune chronic endometritis. The most vulnerable period of gestation at the first trimester was the period from 6 to 8 weeks of gestation in 321 (64%) cases, which is probably due to an impairment of the first wave of invasion of the cytotrophoblast into the inferior endometrium with the receptor apparatus damaged. Medical pharmacological termination of MA is one of the safest treatments in the early period at the first trimester with a lower incidence of complications (6%), compared to surgical abortion (17%). Given that the low incidence of complications after the pharmacological cleaning of the uterus during MA in early stages, this method can be proposed to be performed in the outpa-

tient settings of walk-in clinics under the rigorous supervision of a physician.

References

1. Dikke G.B. Medikamentoznyiy abort: Rukovodstvo dlya vrachey [Medical abortion: a guide for doctors] / Pod red. V.E. Radzinskogo [Ed. V.E. Radzinsky]. Moscow: MEDpress-inform, 2015, 344 p.

2. Radzinskiy V.E. Dimitrova V.I. Mayskova I.Yu. Nerazvivayuschayasya beremennost. Rukovodstvo. Biblioteka vracha-spetsialista [Undeveloped pregnancy. Guide. Library of a specialist doctor]. Moscow: GEOTAR-Media, 2009, 200 p.

3. Radzinskiy V.E. Rukovodstvo po ambulatorno-poliklinicheskoy pomoschi v akusherstve I ginekologii [Guidelines for outpatient care in obstetrics and gynecology]. Moscow: GEOTAR-Media, 2014, p. 163.

4. Serov V.N. Suhih G.T. Akusherstvo I ginekologiya: Klinicheskie rekomendatsii [Obstetrics and gynecology: clinical guidelines]. Moscow: GEOTAR-Media, 2014, p. 607.

5. Saveleva G.M. Suhih G.T. Serov V.N. Radzinskiy V.E. Akusherstvo. Natsionalnoe rukovodstvo [Obstetrics. National leadership]. Moscow: GEOTAR-Media, 2015, p. 207.

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