

## A Clinical Case of a Combination of Pregnancy and a Submucosal Node of Uterine Fibroids

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### Abstract

Own data on the prevalence of uterine fibroids in the population in different categories of women are indicated.

An unusual clinical case of a combination of pregnancy and a myoma node located submucosally is presented.

Decreased blood loss can be achieved by using new technologies, combining the simultaneous execution of caesarean section and myomectomy.

**Keywords:** *Pregnancy; Submucous Uterine Myoma; Operative Delivery; Myomectomy*

### Relevance

Uterus myoma is the most common tumor disease of the internal genital organs of women. In the hierarchy of gynecological diseases, uterine fibroids ranks second. In European countries, it occurs in 24 million women, in North America in 20 million patients [1-3].

According to the results of our study, uterine fibroids during preventive examinations were found in 18 - 20% of women and during pregnancy in 8 - 10%. In gynecological hospitals - in 25 - 30%. According to morphology, 85% are benign tumors [3].

According to the results of our study, uterine fibroids up to 65% of cases are detected at the age of 40 - 50, when women seek medical help. At the age of 21 - 36 years, uterine fibroids are combined with infertility (21%), miscarriage (27%), ovarian dysfunction (29%) [3].

In the last decade, the disease has occurred in younger girls and women. Researchers associate this with an increase in the incidence of inflammatory diseases of the genital organs and early onset of sexual activity [1]. The results of our study show that under the age of 21, fibromatous nodules are found in 4% of all women identified by ultrasound.

During pregnancy, there is an increase in myomatous nodes [2]. At the same time, despite conservative therapy, benign tumors of intermuscular localization grow most intensively, since they have optimal conditions for blood supply. Slow growth is observed in subserous

myomatous nodes. Any localization of nodes, even small ones, lead to an “acute abdomen”, in view of the torsion of the tumor legs. Given the characteristics of blood supply, submucosal fibroids grow slowly. Despite this, there may be conditions in which women seek medical help: intermenstrual bleeding from the genital tract, infertility, miscarriage, etc.

Currently, we work according to the following scheme: in the presence of a myomatous node of more than 40 mm or if it is submucous, it is necessary to individually carry out a special one in the pregravid period, aimed at reducing its size or removing it (drug therapy, myomectomy, etc.) [3]. This is divided for the prevention of a miscarriage node, since during gestation with the growth of uterine fibroids, myometrial ischemia in the area of location increases many times, which leads to deformation of the contours of the uterine cavity and to miscarriages.

In the presented work, the authors set a goal: to present an unusual clinical case of interest to practitioners.

### Case Report and Discussion

Patient L., 28 years old, applied to the gynecological department with a clinical term threatened termination of pregnancy at 7 - 8 weeks of gestation. This pregnancy is the first and desired. Registered for pregnancy and childbirth in the antenatal clinic from 6 - 7 weeks of pregnancy after an ultrasound examination, which diagnosed not only uterine pregnancy, but also a large submucous myomatous node. The patient was offered abortion followed by myomectomy, and then prepare for a second pregnancy, which she refused.

During hospitalization, an ultrasound scan was performed, which diagnosed the presence of a fetal egg measuring 7 - 8 weeks, as well as the presence of a retrochorial hematoma and a submucosal myoma node located on the posterior surface. the wall of the uterus (size 77 x 64 mm). Conservative hemostatic and conserving therapy have been shown to be effective. The patient was discharged from the gynecological department after 10 days with a progressive pregnancy.

At 11 - 12 weeks of pregnancy, the patient is also hospitalized with the same clinic.

We adhere to prophylactic metabolic therapy during pregnancy in patients at risk of developing placental dysfunction. This therapy can improve the function of the fetoplacental complex and prevent the progression of placental insufficiency [4,5]. Despite the ongoing preventive therapy to improve functions in this clinical situation, intrauterine growth retardation was observed against the background of uterine fibroids. But the condition of the fetus throughout the pregnancy was satisfactory and did not cause any concerns.

At 35 weeks of gestation, the patient received antianemic therapy for mild iron deficiency anemia.

At 38 weeks in an obstetric hospital, ultrasound examination established the size of the submucosal nodule 88 x 64 mm and its echographic structure indicated edema of its tissue. The patient was worried about scanty bloody discharge from the uterus. The decision was made to deliver by cesarean section and to carry out surgical organ-preserving treatment of uterine fibroids. In order to reduce intraoperative blood loss, previously developed methods were used, for which patents of the Russian Federation for inventions were obtained [6,7].

To prevent coagulopathic bleeding when the anterior abdominal wall is cut during cesarean section, the patient was injected intravenously with 10 ml of 10% calcium gluconate solution and 10 ml of tranexamic acid (RF patent No. 2629040 for the invention “Method for the prevention of coagulopathic bleeding during cesarean section” [6].

This dosage of drugs is optimal for achieving an effect in a pregnant woman, and is also safe for the fetus.

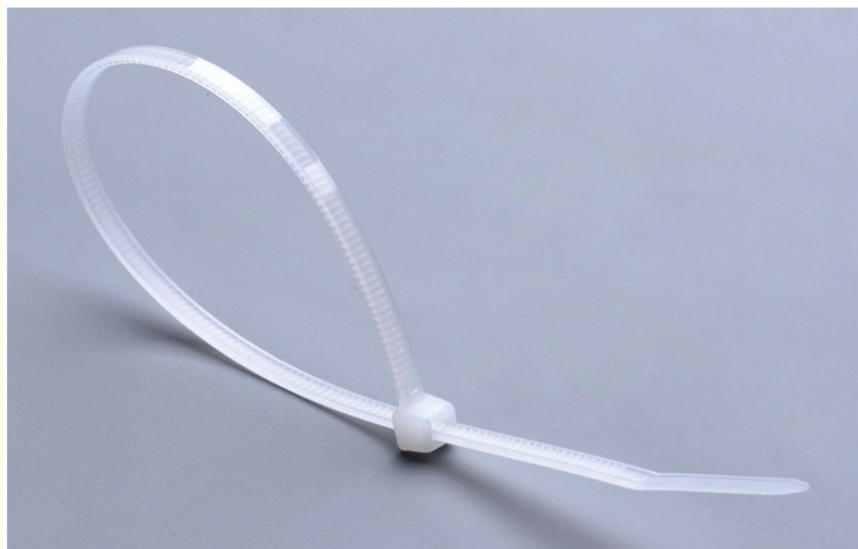
Calcium gluconate works according to the following mechanism: increased coagulation and rapid thrombosis in the area of the vascular wall defect. Calcium ions belong to the IV plasma factor of the blood coagulation system and are a trigger in the sequential activation

of other plasma coagulation factors (II, III, Va, Xa, XIa, XIIa, XIIIa). Also, calcium takes part in the contraction of the smooth muscles of the body of the uterus, which is the prevention of uterine hypotension.

The pharmacokinetics of tranexamic acid is that it suppresses the fibrinolytic activity of the hemostasis system and slows down the resorption of thrombus formation in the damaged vessel. Tranexamic acid helps to reduce tissue bleeding during and after surgery and reduces blood loss. Another important pharmacological property of tranexamic acid is its anti-inflammatory effect. It inhibits the formation of kinins, pro-inflammatory cytokines (tumor necrosis factor, interleukin-1, interleukin-2) and other active peptides involved in inflammatory and allergic reactions [6].

For the purpose of devascularization of the uterus at caesarean section in the clinical case, we used the original method uterine temporary mechanical ischemia developed according to the invention (RF Patent № 2638459 “Method for reducing blood loss during caesarean section”) [7].

In this invention, we use a plastic loop (Figure 1), which has the necessary flexibility and strength, is securely fixed with a lock and, after use, can be easily cut off with scissors. This loop is included in the register of medical devices and has a low cost.



**Figure 1:** Plastic hinge with a lock.

The main stages of the method: during a cesarean section after an incision in the uterus, removal of the fetus and afterbirth from the uterine cavity on the isthmus of the uterus, the loop is tightened to capture its ligaments and passing vessels. After suturing the wound on the uterus, the plastic loop is cut with scissors and removed from the abdominal cavity [7].

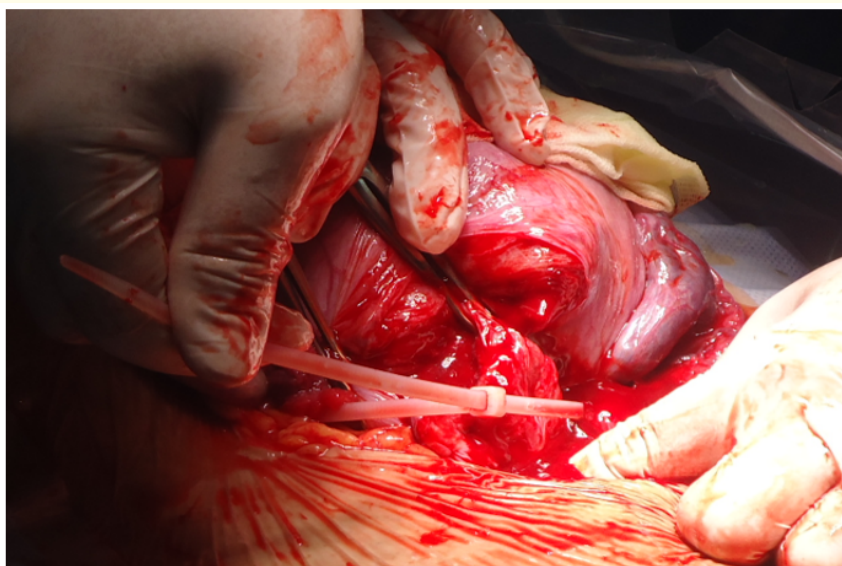
The important features of the proposed method are ease of implementation, quick execution of manipulations and the absence of systemic effects on the body.

In addition, this method can be used not only to prevent blood loss during caesarean section, but also to stop the developed uterine bleeding due to compression of tissues in the isthmus of the uterus, which leads to compression of the uterine vessels, ischemizing the

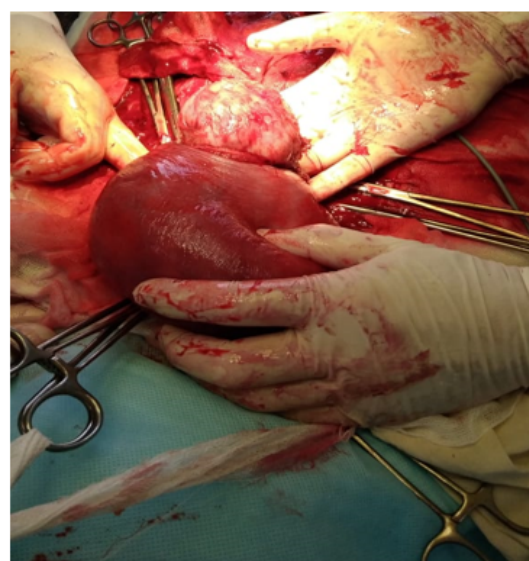
upper and lower floors on the uterus. The practical significance lies in reducing blood loss and preventing perioperative complications (by 60%) [7].

In this clinical situation, a live female full-term baby weighing 2600g, 51 cm in height and an Apgar score of 8/9 was removed by caesarean section.

After fixing the plastic loop on the uterus (Figure 2), when examining the uterine cavity, it was found that a submucosal node with a diameter of 90 mm and a soft consistency was located along the posterior wall of the uterus (Figure 3). Enucleation of the myomatous node was performed (Figure 4), in which its bed was sutured with separate vicryl sutures in one row. The total intraoperative blood loss was 450 ml.



**Figure 2:** Applying and tightening the loop in the lock below the surgical incision in the uterus.



**Figure 3:** Examination of the uterine cavity and submucous located myomatous node.



**Figure 4:** *Remoted myoma node.*

The postoperative period was uneventful. On the 5<sup>th</sup> day after the cesarean section and enucleation of the myomatous node, the postpartum woman and the child were discharged from the hospital.

### Conclusion

Thus, if patients decide to maintain pregnancy with the above localization of uterine fibroids, they should understand their degree of responsibility for themselves and the unborn child. The great importance and attitude of medical professionals to the management of such patients. It is important to use the new technologies of operative delivery on time, which contributes to the achievement of a favorable obstetric and perinatal outcome in patients with unusual pathology.

### Conflict of Interest

No conflict of interest.

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