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A Modern Perspective on The Course of Pregnancy and Childbirth in Women with Uterine Fibroids

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Abstract

The problem of preserving the reproductive function in women with uterine fibroids has now acquired significant social and medical importance. The increasing incidence of uterine fibroids in women of reproductive age is more frequently raising the question for obstetricians-gynecologists about the possibility of achieving and successfully completing pregnancy in the presence of this condition. The article analyzes literature data concerning gestational and perinatal complications associated with uterine fibroids.

Keywords: Pregnancy, uterine fibroids, perinatal and gestational complications.

Introduction

Uterine fibroids are one of the most common benign diseases of the female reproductive system, occurring in women of reproductive age with a frequency of up to 30–40%. The increasing number of patients planning pregnancy in the presence of uterine fibroids makes a comprehensive study of the characteristics of pregnancy course, delivery, and risk factors for perinatal complications highly relevant. According to current data, 2.7–10.7% [2] of all pregnancies are associated with uterine fibroids. Previously, the presence of fibroids was considered a relative contraindication to pregnancy; however, modern medicine, advances in diagnostic methods, ultrasound, and minimally invasive surgery now allow most women to successfully carry a pregnancy to term. Nevertheless, uterine fibroids remain a risk factor that can complicate the course of gestation.

Specific complications should be expected, such as placental invasion into a myomatous nodule (5%), impaired blood supply to the nodule (2.5%), and growth of the nodule during pregnancy (2.5%). Significant tumor size contributes to abnormal fetal presentation, including breech, transverse, or oblique lie.

Most fibroids during pregnancy are asymptomatic [3, 8], but complications develop in 10–20% of cases, the most common of which is abdominal pain, usually caused by fibroid degeneration or torsion of the pedicle of a subserosal fibroid.

The formation and growth of leiomyoma are associated with a complex interaction of steroid hormones and their receptors in the myometrium and the tumor itself, mediated by a range of factors influencing the processes of proliferation, apoptosis, and angiogenesis. It is known that up to the 10th week of pregnancy and in the early second trimester, the greatest growth of fibroids is observed, ranging from 12% to 25% on average from the initial size. In the third trimester, fibroids generally do not show significant growth, or a reduction in their size is observed, which is related to a decrease in estrogen-dependent regulation [3,4,13].

Women with uterine fibroids have a higher risk of spontaneous abortion compared to women without fibroids. Large fibroid nodules may disrupt normal embryo implantation and its subsequent development, thereby increasing the likelihood of miscarriage. In the study by M. Cagan et al., the rate of spontaneous abortion was 16% among 172 patients [1,6,12]. Twenty-five pregnant women with a single fibroid <5 cm were studied. The control group included 147 pregnant women without

uterine fibroids. In patients with uterine fibroids, the size of the nodules was measured, their localization was described, and pregnancy outcomes were evaluated.

Large uterine fibroids (>5 cm) increase the risk of obstetric complications and operative abdominal deliveries. In the study by S. V. Barinova et al., it was shown that performing myomectomy as part of preconception preparation reduces the risk of preterm birth later on [17]. Large fibroids measuring >8 cm are more likely (almost 100%) to be associated with the threat of miscarriage, predominantly in the first trimester (39% of cases). Cervical localization of fibroids may contribute to the development of isthmic-cervical insufficiency, thereby increasing the risk of preterm birth. Authors who argued that uterine fibroids do not affect pregnancy loss did not compare risks with the size of the fibroid nodule in their studies. Other researchers associated the risk of miscarriage with the number of fibroids rather than their size [1, 3][15, 17].

Large myomatous nodules can lead to abnormal fetal position and presentation, which increases the likelihood of complications during labor and the need for surgical intervention; however, small uterine fibroids do not affect the frequency of malpresentation [16]. In one study conducted among 41 women, the incidence of fetal malpresentation was 12.5% [11]. In another study conducted in India in 2023 among 110 women, the incidence of fetal malpresentation was 17.65%, as a result of which delivery was performed by cesarean section [2, 10].

In the study by K. Karlsen et al. (2020), which included a sample of 91,292 women with uterine fibroids, the rate of placental abruption was 0.5% [12]. In 2022, E. Jenabi et al. analyzed 419,460 cases of placental abruption and found that only 1.22% of cases of premature detachment of a normally located placenta were associated with the presence of fibroids [2, 9, 15].

Uterine fibroids may contribute to the development of postpartum hemorrhage due to impaired uterine contractility and changes in its vascular system. In an Omani study, postpartum hemorrhage was more common in women with large uterine fibroids (n = 8; 19.5%) compared to women without fibroids (n = 4; 4.5%), p = 0.018 [19]. In an Indian study conducted in 2023, postpartum hemorrhage was observed in 9.09% of 110 women in labor with uterine fibroids [12].

Large fibroids can restrict the space within the uterine cavity, acting as a factor that impedes fetal growth. Danish researchers conducted a study in 2022 in which, among 91,292 pregnant women, fetal growth restriction was observed in 1.3% of cases [4, 8, 9]. In a 2021–2022 study, it was found that the presence of three or more fibroids in women increased the risk of delivering infants with abnormal birth weight at early gestational age [2]. In healthy women and patients with a single uterine fibroid, no effect on fetal weight or gestational age at delivery was identified [1,9, 12, 13]. In the study by A. Choudhary, S. A. Inamdar et al. (2023), among a sample of 110 women, 16.36% of infants were born with low birth weight [4].

Most often, delivery proceeds vaginally if the woman's condition allows [2, 4]. In cases of small fibroids, labor usually occurs without complications; however, large nodules may weaken uterine contractility. The presence of cervical and isthmic fibroids is an indication for operative abdominal delivery. It should be noted that patients with uterine fibroids experience postpartum hemorrhage 2.5 times more often [12, 15]. Fibroids located in the uterine fundus may cause delayed placental separation, which in 30% of cases leads to blood loss [5,10].

Based on the information presented above, the following recommendations for obstetricians-gynecologists regarding the management of pregnant women with uterine fibroids were formulated:

Regular ultrasound examinations to monitor the size of fibroid nodules and their effect on the uterine cavity; determination of fibroid localization in order to choose further obstetric management tactics; and the use of magnetic resonance imaging when necessary.

Systematic monitoring of women with uterine leiomyoma (UL) is necessary to detect early signs of complications (threatened miscarriage, placental disorders, etc.); in cases of UL >5 cm, hospitalization in a pregnancy pathology unit should be considered in order to manage the risk of preterm labor.

Choice of delivery method: Vaginal delivery is preferred (in the absence of other indications for cesarean section). In the presence of large uterine leiomyomas located in the cervical or isthmic region of the uterus, cesarean section may be indicated. The high risk of postpartum hemorrhage should be taken into account, and readiness for prompt intervention is essential.

Conclusion

The most significant obstetric complications include: threatened miscarriage, chronic placental insufficiency, fetal growth restriction, placenta previa and abnormal placental implantation, disorders of labor activity, an increased risk of postpartum hemorrhage, and a higher rate of operative delivery. Despite a large volume of research, a number of aspects remain insufficiently studied, including the prediction of pregnancy outcomes depending on the size and location of fibroid nodules, as well as the impact of prior myomectomy.

References

1. Akhatova A. et al. Reproductive and obstetric outcomes after UAE, HIFU, and TFA of uterine fibroids: systematic review and meta-analysis //International Journal of Environmental Research and Public Health. – 2023. – Т. 20. – №. 5. – С. 4480.

2. Al Sulaimani R., Machado L., Al Salmi M. Do large uterine fibroids impact pregnancy outcomes? // Oman Medical Journal. 2021. Vol. 36, no. 4. P. 292. https://doi.org/10.5001/omj.2021.93.

3. Chen F. Puerperal spontaneous prolapse of large pedunculated uterine submucosal myoma after full-

term vaginal delivery. – 2019.

4. Choudhary A., Inamdar S. A., Sharma U. Pregnancy with uterine fibroids: Obstetric outcome at a tertiary care hospital of central India // Cureus. 2023. Vol. 15, no. 2. P. 1-7. https://doi.org/10.7759/cureus.3551.

5. Coutinho L. M. et al. Uterine fibroids and pregnancy: how do they affect each other? //Reproductive Sciences. – 2022. – Т. 29. – №. 8. – С. 2145-2151.

6. Datir S. G., Bhake A., Datir II S. G. Management of uterine fibroids and its complications during pregnancy: a review of literature //Cureus. – 2022. – Т. 14. – №. 11.

7. Patel D. J. et al. Navigating Pregnancy With Uterine Fibroids: A Case Study //Cureus. – 2024. – Т. 16. – №. 7.

8. Dobrokhotova Y. E. et al. Pregnancy and labor in patients with uterine fibroids //VF Snegirev Archives of Obstetrics and Gynecology. – 2025. – Т. 12. – №. 1. – С. 5-14.

9. Dohbit J. S. et al. Diagnostic ambiguity of aseptic necrobiosis of a uterine fibroid in a term pregnancy: a case report //BMC pregnancy and childbirth. – 2019. – Т. 19. – №. 1. – С. 9.

10. Fatkullin I. F., Orlov Y. V., Fatkullin F. I. Modern approaches to the management of pregnancy in uterine myoma //Medical Herald of the South of Russia. – 2023. – Т. 14. – №. 2. – С. 44-51.

11. Ibragimovna A. S. Comparative Analysis Of Pregnancy Rates In ART In Young Women With Uterine Fibroids After Different Approaches To Organ-Preserving Treatment //Nvpubhouse Library for International Journal of Medical Science and Public Health Research. – 2025. – Т. 6. – №. 12. – С. 19-27.

12. Karlsen K., Schiøler Kesmodel U., Mogensen O. et al. Relationship between a uterine fibroid diagnosis and the risk of adverse obstetrical outcomes: A cohort study // BMJ Open. 2020. Vol. 10, no. 2. P. 1-9. https://doi.org/10.1136/bmjopen-2019-032104.

13. Krupnyk O. M. OBSTETRICIANS'TACTICS IN THE DELIVERY BY PATIENTS WITH BREECH POSITION OF THE FOETUS AFFECTED BY THE UTERINE MYOMA //Актуальні питання педіатрії, акушерства та гінекології. – 2018. – №. 2. – P. 118-121.

14. Markin L., Besedin O., Isayeva K. Features of Giving Aid to Pregnant Women with Uterine Leiomyoma //Львівський клінічний вісник. – 2017. – №. 4. – P. 54-59.

15. Jenabi E., Salimi Z., Ayubi E. et al. The environmental risk factors prior to conception associated with placental abruption: An umbrella review // Systematic Reviews. 2022. Vol. 11, no. 1. P. 55. https://doi.org/10.1186/s13643-022-01915-6.

16. Pérez-Roncero G. R. et al. Uterine fibroids and preterm birth risk: A systematic review and meta-analysis //Journal of Obstetrics and Gynaecology Research. – 2020. – Т. 46. – №. 9. – С. 1711-1727.

17. Tyurina N. A. et al. Pregnancy and childbirth in women with multiple uterine fibroids //Obstetrics and Gynecology. – 2025. – №. 4. – С. 158-163.

18. Zhao S. K., Wu P., Jones S. H. et al. Association of uterine fibroids with birthweight and gestational age // Annals of Epidemiology. 2020. Vol. 50. P. 35-40. https://doi.org/10.1016/j.annepidem.2020.06.