Journal of Obstetrics, Gynecology and Cancer Research | ISSN: 2476-5848

# Myomectomy After Cesarean Section: Considerations and Planning

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**Article Info**

10.30699/jogcr.10.4.333

**Received:** 2024/04/12;
**Accepted:** 2024/07/03;
**Published Online:** 22 Feb 2025;

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**ABSTRACT**

Uterine myoma is benign tumor of the uterus enlarges during pregnancy, with incidence 0.1 – 10.7%. Uterine myoma in pregnancy is always interesting to learn, in terms of the effect of myoma in pregnancy or the effect of pregnancy on myoma. Reporting 24-year-old woman with a large intramural uterine myoma was referred to hospital at 36 weeks of gestation and the baby's head haven't entered the pelvic inlet because it was blocked by that large myoma , then decided to do a cesarean section. We also did a myomectomy after a cesarean section due to a large myoma that could block the uterine subinvolution with the risk of postpartum hemorrhage. An elective cesarean myomectomy was performed at 38 gestational ; the outcome was baby boy 3340 g and a large fibroid (12 cm) followed by insertion of IUD intra uterine cavity to prevent adhesion. With proper examination and planning during pregnancy, myomectomy after cesarean section will give safe.

**Keywords:** Cesarean, Myomectomy, Pregnancy

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## 1. Introduction

Uterine fibroid or myoma is a common benign smooth muscle tumor of the uterus and affects 40 – 60% of women of reproductive age. Pregnancy itself has wide-ranging impacts on uterine myoma, these include its evolvement during pregnancy with incidence ranges from 0.1 – 10.7%. **(1-3)** Most of the uterine myoma in pregnancy is usually asymptomatic and showed no considerable changes in size during pregnancy. However, 20 – 30% of cases may increase in size with a high-risk complication such as torsion of the uterus if pedunculated, risk of infection, red degeneration, expulsion if pedunculated and submucous, and necrosis **(4-6)**. Depending on the size, type, and location of the myoma, conservative observation with counseling during pregnancy and labor is chosen as the first line, unless other considerations endanger both the mother and the baby caused by the myoma, an operation procedure could be planned **(7-9)**. In pregnancies with myoma, it is necessary to perform a detailed examination to estimate whether it is necessary to perform a myomectomy during cesarean section or myomectomy can be carried out during the puerperium because the size of the myoma itself will shrink during the puerperium **(10-12)** The option of cesarean myomectomy is studied case by case because myomectomy during cesarean itself has the risk of causing large amounts of bleeding **(2, 13-15)**. In this case, myomectomy was performed because the position of a large intramural myoma in the lower anterior corpus precluded uterine involution after delivery. It will be a great risk of uterine atony which results in postpartum hemorrhage. The management of this patient was successful because we made integrated planning before surgery. We documented this case to enrich counseling options for pregnancy with myoma.

## 2. Case Presentation

A 24-year-old primigravida was referred to our hospital due to a large anterior intramural uterine fibroid at 36 weeks of gestation. Previously, this patient had never had a routine antenatal care at our hospital. The patient did not complain of any contractions or

vaginal bleeding. Physical examination found that the lowest presentation of the fetus was the head, but it hasn't entered the pelvis inlet because it was obstructed by a large myoma which was at the anterior of the lower uterine segment. It was found on ultrasonographic examination (Figure 1) of a single live head presentation fetus with an estimated fetal weight of 3235 grams. The placenta was found in the anterior corpus of the uterus, with a myoma mass in front of it. The myoma was found in the anterior uterine corpus extending inferiorly with a size of 9 x 8 cm clear bordered, pressing towards the uterine cavity with the myoma facing the implantation of the placenta.

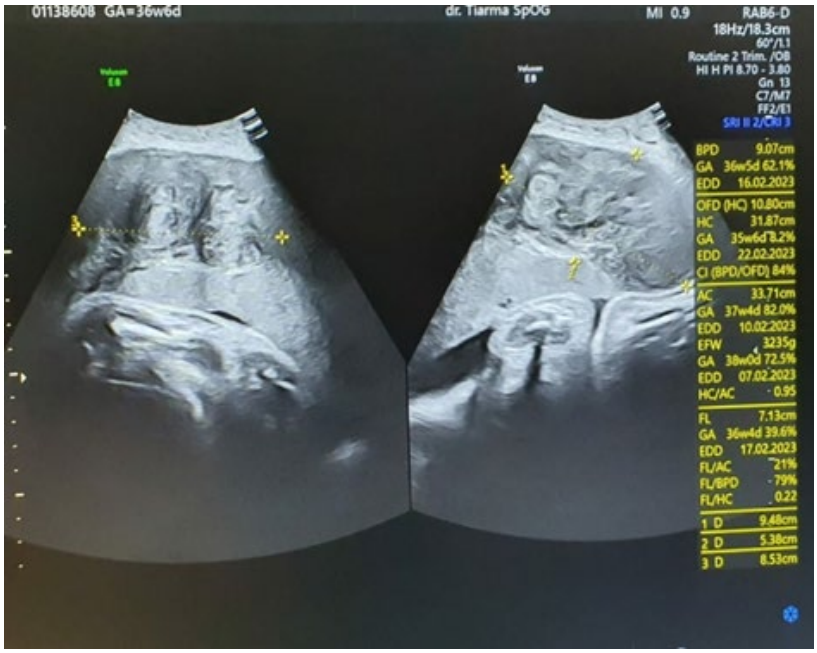



**Figure 1.Ultrasound finding: myoma in pregnancy**

Delivery was determined by doing an elective cesarean section due to the obstruction of the vaginal delivery path by a large mass of myoma. Myomectomy post-cesarean section in this patient was also considered due to the large intramural (9 cm) uterine myoma that will also interfere the uterine involution with the risk of postpartum hemorrhage.

The risk of intraoperative bleeding, such as postpartum bleeding due to anemia, or postpartum bleeding due to myomectomy procedures is anticipated by improving hemoglobin levels before surgery and planning surgical techniques. With a starting hemoglobin level before surgery of 12 g / dL, an elective cesarean section was carried out at 38 weeks of gestation, by consideration fetal viability has been achieved, and this gestational age was the lowest risk of uterine contractions that continue into labor condition. The baby born with a birth weight of 3300 grams in good condition with clear and adequate amount of amniotic fluid. The placenta was in the anterior corpus, born well. After the baby and placenta were born, there were unstable uterine contractions due to the myoma almost filling the entire uterus (Figure 2). Myomectomy was then performed after cesarean section (Figure 3) by administering vasoconstrictive drugs around the uterus before myomectomy to reduce bleeding. When performing a myomectomy for a part of the myoma that pressed into the uterine cavity, a surgical procedure was found penetrated the uterine cavity (Figure 4).

After removal of the myoma, the uterus was sutured to its original shape. The intra Uterine Device (IUD) was inserted into the uterine cavity to prevent adhesions (Figure 5). At the end of the procedure, uterine contractions were good and stable, intraoperative bleeding was 300 cc. The operation took 70 minutes, with a total of four days of hospital care (a day before surgery and three days after surgery).



**Figure 2.** Large myoma in lower anterior uterine

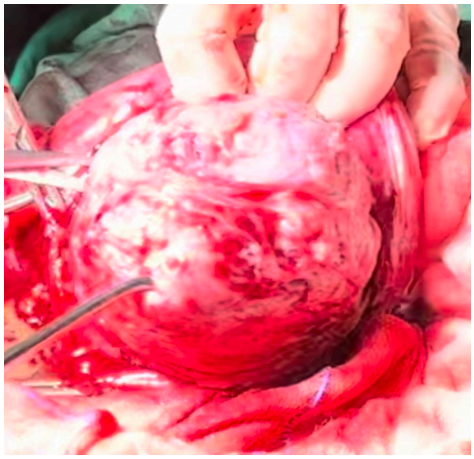


**Figure 3.** Myomectomy after Cesarean Section

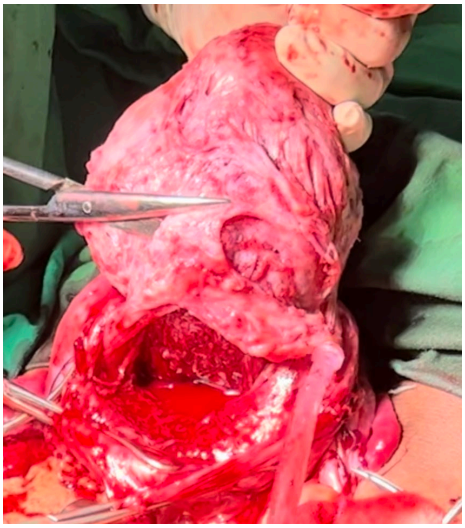


**Figure 4.** Intramural myoma pressing toward the uterine cavity

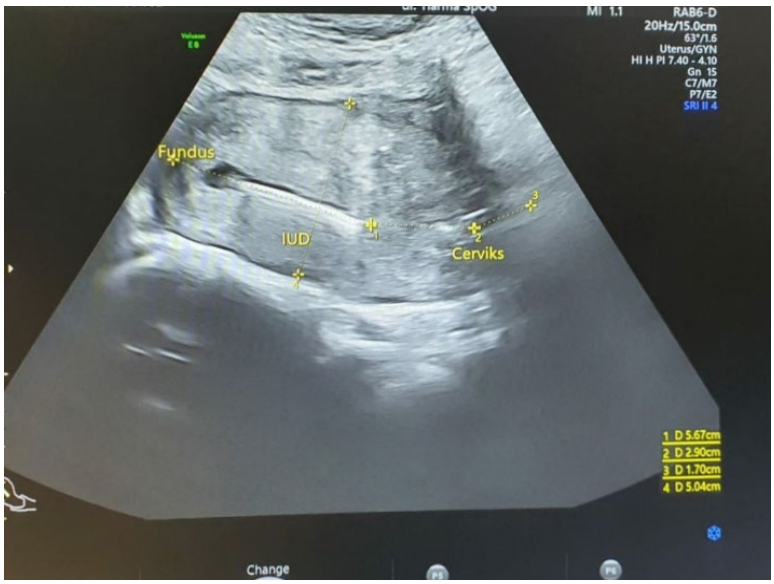



**Figure 5.** Ultrasound finding: IUD intra uterine cavum. There were no signs of intra-cavum uterine adhesions

Postoperative care was good, hemoglobin levels were stable at 11.8 g/dL. Seven (7) days post-discharge, a physical examination was done, a round and good uterus contraction was found, and it was

palpable halfway between the symphysis pubis and umbilicus. Vaginal discharge was normal, with serous lochia. Ultrasound examination also showed, the fundus length up to the cervix was 9 cm, an intra cavum IUD visible, intra cavum uterine synechia was not visible.

## 3. Discussion

The presence of myomas in pregnancy can result in impaired fetal growth and disturbances in the position of the fetus in the uterus **(1, 16, 17)**. On the initial examination, the position of the myoma was found pressing against the uterine cavity. In the part where the uterine cavity was pressed by the myoma, there was found an implantation of the placenta. That carries several serious risks in pregnancy, such as the risk of intrauterine fetal growth retardation and placental abruption because the supply of blood flow shared between fetal and myoma growth **(18, 19)**. With the presence of a myoma at the anterior lower front of the uterine corpus, it also increases the risk for malpresentation, preterm contractions, incoordinate contractions and impaired postpartum contractions. In this case, the growth of the fetus is good, there are no signs found of placental abruption, but the impact of the myoma was malpresentation. Other obstetric complications that coexist in pregnancy include degeneration and torsion, early pregnancy loss, preterm labor and birth, placental abruption, malpresentation, placenta previa, cesarean birth, dysfunctional labor, postpartum hemorrhage, and fetal deformities. Interestingly, myoma in pregnancy does not increase the risk of complications of preterm pre-labor rupture of membranes, fetal growth restriction, fetal demise, and preeclampsia **(3, 9, 14)**.

This patient was referred to our hospital at 36 weeks of gestation. We still had time to assess the baby's growth, the baby's position in the uterus and the size and position of the myoma. In this patient, the growth of the baby was good, but the baby's head could not enter the pelvic inlet because it was obstructed by the myoma in the anterior lower front of the uterine corpus, so it was decided to give birth by cesarean section at 38 weeks of gestation. Before the procedure, the patient was given an informed consent. The information provided, such as the diagnosis, basis for diagnosis, action, indication of surgery or surgery, purpose of surgery, complications, prognosis, alternatives and risks. Operation planning was done with a careful consideration, whether it is necessary to do direct myomectomy after cesarean section or delay myomectomy in the puerperium phase. As we know from literature, in the postpartum phase, the myometrium will contract and shrink to stop bleeding from the spiral arteries that supply blood throughout the uterus. These uterine contractions mechanically reduce blood flow and prevent postpartum hemorrhage **(20, 21)**. Cesarean myomectomy can be the effective surgical option to enucleate uterine myoma **(22)**.

The presence of pathological tissue in the uterus can be a risk factor for uterine atony because it will reduce uterine contractions, which are very necessary during the puerperium to stop postpartum bleeding. This disruption of the uterine muscle cause of fibrous tissue will result in uterine atony and cause postpartum hemorrhage **(23, 24)**. In this patient, we found several facts that the size and position of the myoma would obstruct uterine involution after delivery, which is at risk of postpartum hemorrhage, finally it was planned to perform myomectomy directly after cesarean section (baby and placenta were born). Myomectomy performed safely and bleeding can be controlled. When performing myomectomy, there was a part of the excision penetrated the uterine cavity. It was previously predicted from previous ultrasound examination because the position of the myoma was pressed on the uterine cavity (Figure 1).

Long-acting reversible contraceptives, such as IUD, can reduce the risk of unwanted birth. A copper IUD is recommended as a first line contraceptive treatment for sexually active **(25)**. In this patient, an IUD was placed into the uterine cavity while performing suturing to restore the shape of the uterus to prevent intrauterine adhesions (Figure 5). Intrauterine adhesion (IUA), also known as Asherman's syndrome, is reported and studied because of surgical trauma to the endometrium. Likewise, myomectomy also has the potential to experience adhesion. IUA affects pregnancy, infertility, loss of repeated pregnancies, poor implantation, and abnormal placentation. To prevent IUA, surgeons have tried using a series of solid and semi-solid barriers as a secondary prevention strategy to supply artificial interlayers between uterine walls to prevent their fusion during early healing **(26-28)**.

In this patient, there were no postoperative complications due to good planning and preoperative preparation, good operation procedure and good postpartum monitoring. Mobilization in postoperative cesarean section patients is very important; this can help reduce postoperative pain so that the mother can be more independent. Early mobilization can speed up the healing process of surgical wounds, reduce muscle stiffness, and reduce the risk of bloating. It can also accelerate uterine involution, improve digestive function, and accelerate milk production **(29)**.

## 4. Conclusion

Most uterine fibroids (myoma) in pregnancy are asymptomatic, therefore early detection is needed. With proper examination and planning during pregnancy, myomectomy after cesarean section will give save and good results. The clinical decision-making for myomectomy cesarean section needs to be considered case by case so that optimal patient management is obtained.

## 5. Declarations


### Acknowledgments

The authors thank all those who helped us to write this article.


### Ethical Considerations

Not applicable.

### Authors' Contributions

Pardede Tiarma Uli: Study conception, data gathering, article writing. Yuriko Wada: Data analysis, article writing. Leni Suhartini: Study design, article writing, article editing.

### Conflict of Interest

The authors declare no conflict of interest.


### Fund or Financial Support

This research received no specific grant from any funding agency in the public, commercial, or not for profit sector.


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**How to Cite This Article:**

Uli Pardede, T., Wada, Y., Suhartini, L. Myomectomy After Cesarean Section: Considerations and Planning. J Obstet Gynecol Cancer Res. 2025;10(4):333-8.

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