

Successful Pregnancy Outcome after Abdominal Myomectomy on an Infertile Woman: A Case Report

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Abstract

Leiomyoma is one of the factors causing infertility in women. Uterine myomas according to their location are divided into subserosal, intramural, submucosal. Myoma surgery depends on its location, the size of the tumor, complaints that arise, and the preservation of reproductive function. We report a woman with a 5-year history of infertility who successfully conceived and had a spontaneous vaginal birth, without any complications for either the mother or the baby after abdominal myomectomy.

Keywords: Successful pregnancy, Infertility, Intramural uterine leiomyoma, Abdominal myomectomy

Introduction

Uterine myomas (also called leiomyomas or uterine fibroids) clinically occur in 20% - 25% of women of their reproductive age. Symptoms of uterine myoma can vary depending on the size and location of the myoma, which will affect the results of conception, infertility, complications in pregnancy, and abortion. Leiomyomas have been classified according to the location of myomas in the uterus, generally known as submucosal, intramural, and subserosal. Uterine myomas are found in 5-10% of infertile patients and may be the sole cause of infertility in 1-2.4% of cases^{1,2}

Uterine myomas have a great variety in size, location, and amount, as well as the mechanism by which they can cause infertility.³ Removing uterine myomas increase the pregnancy rate from 25% to 42%.⁴ The most common management of uterine myomas in the reproductive age is the method of abdominal myomectomy and laparoscopic myomectomy.⁵ Pregnancy after myomectomy can increase the risk of intrauterine adhesion, miscarriage, premature birth, abnormal placental location, and uterine rupture. The meta-analysis from several study centers showed that the risk of uterine rupture was 0.4% in patients undergoing abdominal myomectomy.^{6,7,8} We report a case of a woman suffering from uterine myomas,

with a history of 5-year primary infertility, who went on to have a successful natural pregnancy after abdominal myomectomy.

Case Presentation

A 31-year-old woman came to the emergency room with complaints of heavy bleeding from the genitals, accompanied by abdominal pain. The patient has been married for 5 years yet has never been pregnant. Good general condition, normal physical examination. The vaginal examination was notable for a 20-week size uterus. Uterine cervix and adnexa were normal. Ultrasound examination revealed the presence of intramural uterine leiomyoma with a size of 10.14 cm × 7.81 cm × 4.60 cm (Figure 1). Then it was decided to do an abdominal myomectomy (Figure 2). An abdominal myomectomy was performed by the nine-centimeter Pfannenstiel incision of a 10 cm and 7 cm uterine leiomyoma. The pelvic organs and peritoneal surfaces were otherwise normal. After surgery, the patient's uterus was shrunk to be 9-week sized.

Eight months after the operation the patient got pregnant, but in the twentieth week of pregnancy she suffered from a miscarriage, and curettage is performed. Six months after the miscarriage, and curettage, the patient was pregnant again for the second time. Nine months later at 38 weeks' gestation, the patient had a spontaneous vaginal delivery. A healthy baby girl was born, weighing 3080 grams, with a good Apgar score. The patient showed no complications during labor and after birth. Both the healthy mother and baby were discharged from the hospital on the second day.



Figure 1. Sonography examination: Solid, lobulated intramural mass, sized 10.14 cm × 7.81 cm × 4.60 cm

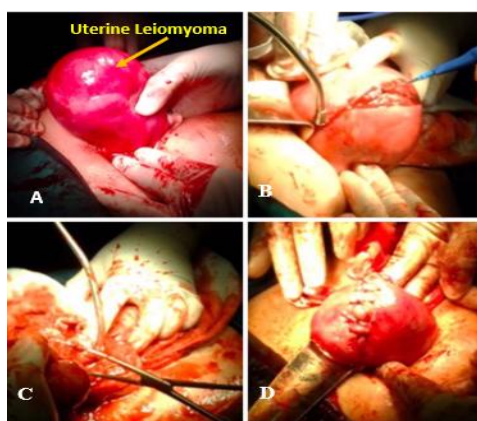


Figure 2. Abdominal Myomectomy Procedure

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A. Uterine leiomyoma B.the uterine wall is incised and opened with cautery to remove leiomyoma tissue
C. The leiomyoma was successfully removed from the uterus D.After the leiomyoma is removed, the uterine scar is sutured / closed again

Discussion

Infertility is one of the main problems affecting 13-15% of couples worldwide. Factors causing infertility in women are due to abnormalities in the ovaries, tubes, peritubal, and uterus.⁹ The myoma uteri are a gynecological tumor that often affects women of reproductive age.^{9,10}

The case we reported was a woman with a 5-year history of primary infertility, post abdominal myomectomy for the indication of intramural uterine myomas. The patient was twice pregnant, the first pregnancy ended in miscarriage, while the second was full term ending in a spontaneous vaginal birth get pregnant until full term and give vaginal birth without any complications for either the mother or the baby.

Uterine leiomyoma is often associated with the cause of infertility, but some literature, studies mention that myoma causes only a few infertility. The position of the myoma influences the occurrence of infertility. Submucosal uterine myomas reduce fertility in patients. Uterine subserosa myoma has no effect on fertility rates but removal from subserous myoma also does not increase the fertility rate. Intramural uterine myoma will reduce fertility but removal does not increase fertility rates.³ The size and location of the myoma can cause a simple physical impedance to the transport of sperm, eggs or embryos which are considered as mechanisms to explain the anti-fertility effects of the uterine myomas. However, the microscopic size of gametes and both bilateralism and the resistance of the reproductive system show that this, by itself, may not be the only mechanism in most cases.¹

A meta-analysis of the effect of myoma on fertility and the effect of myomectomy on fertility mentions that submucous uterine myoma causes uterine cavity distortion which decreases fertility and the incidence of pregnancy success decreases by 70%.² Subserous myoma is found to not affect fertility while intramural uterine myoma (apart from the absence of uterine cavity distortion) is associated with a low incidence of implantation and live-birth rates. Removal of uterine cavity distortion of the submucosa and intramural myoma is recommended for the management of infertility.⁴ Treatment for myoma is the myomectomy, especially in patients who are still in their productive age and still want to maintain the uterus. A retrospective study states that myomectomy in intramural and subserous uterine myomas may significantly improve reproductive performance in women with infertility problems.¹

A retrospective study shows that myomectomy for intramural and subserosal myomas can significantly improve the reproduction of women who experience infertility or miscarriage. About 65.2% of patients with unexplained infertility can become pregnant after they undergo an abdominal myomectomy to eliminate subserous or intramural myomas. Submucosal or intramural myomas distort the uterine cavity, so myomas > 5 cm in size and multiple are indications for intervention in women who are considering pregnancy.¹¹

In previous studies among patients undergoing myomectomy, the pregnancy rate obtained was 56.5% in intramural cases. So, it can be confirmed that the position of the uterine myoma has an important role in infertility and the importance of the removal of the

myoma before pregnancy, to increase chances of conception and maintenance of pregnancy. Other retrospective studies show that myomectomy increases pregnancy and live birth rates and reduces miscarriage. For post myomectomy, there is a miscarriage rate of 9.1% and 90.9% for the live birth rate.¹²

Pregnancy after myomectomy can increase the risk of intrauterine adhesion, miscarriage, premature birth, abnormal placental location, and rupture. Myomectomy laparotomy can cause scars in the myometrium, which can cause muscle wall weakness and can increase the risk for sudden uterine rupture but meta-analysis from several study centers shows that the risk of uterine rupture is as low as 0.4% in patients undergoing myomectomy laparotomy. However, the occurrence of uterine rupture can vary depending on the size, type, and location of the myoma, and other factors such as the stitching technique used for myomectomy, myomectomy intervals with pregnancy.^{6,7,8} In this case, after myomectomy, the patient successfully conceived. In the first pregnancy there is a miscarriage, and in the second pregnancy can successfully become pregnant and give birth to a live vaginal baby and without complications in pregnancy, childbirth, and the puerperium.

Conclusion

Uterine myomas affect infertility and the position of the myoma influences the occurrence of infertility. Myomectomy improves reproductive outcomes in a large number of patients suffering from infertility and should be performed on infertile women with infertility due to uterine myoma.

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Declaration of Patient Consent: The patient gave their consent for their images and other clinical information to be reported in the journal.

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