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A Rare Case of Vaginal Myomectomy in Post-Partum Severe Hemorrhage Caused by a Submucosal Myoma

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Abstract

Introduction: Myoma is the most common benign tumor of the female genital tract. The incidence of myoma increases with age. It mostly presents in the fifth decade of life. Since myoma is often asymptomatic and incidentally diagnosed, the true prevalence is unknown. This tumor may also become symptomatic and affect women's quality of life. This study was performed to report a rare case of vaginal myomectomy in post-partum severe hemorrhage caused by a submucosal myoma.
Case Report: A 39-year-old G2P1 woman with previous cesarean section and decreased fetal movement at 38th week of gestation was hospitalized. In sonography and biophysical profile, due to fetal compromised, pregnancy was terminated. After delivery of fetus, a submucosal myoma (12 × 12 cm) was protruded through cervical canal. Massive hemorrhage occurred and then vaginal myomectomy was done and the bed of myoma was packed with two long gauzes that removed after one day.
Conclusions: Vaginal myomectomy after natural vaginal delivery or possibly during cesarean section is a safe and reliable method to remove submucosal myomas especially large myomas and decrease the risk of complications and costs of re-surgery. Due to the increased risk of hemorrhage, it is better to conduct this surgery in third-level referral hospitals.

Keywords: Myomectomy, Post-Partum Hemorrhage, Submucosal Myoma

1. Introduction

Myoma is the most common benign tumor of the female genital tract. The incidence of myoma increases with age. It mostly presents in the fifth decade of life. Since myoma is often asymptomatic and incidentally diagnosed, the true prevalence rate is unknown. This tumor may also become symptomatic and affect women's quality of life (1).

Myoma typically does not create any problem during pregnancy; however, in some cases, it may lead to spontaneous abortion, preterm delivery, placenta abruption, premature rupture of membranes, abnormal fetal presentation, dystocia, C-section, postpartum hemorrhage, and hysterectomy (2).

The etiopathology of myoma (fibroid) is still unknown. However, myoma has higher concentrations of estrogen and progesterone receptors compared to their adjacent myometrium. Therefore, it seems that the development of these tumors is dependent on these hormones. As a result, it usually occurs in cases with history of early menarche, pregnancy, perimenopause period, and obesity and its growth decreases after menopause. The growth of myoma increases in early pregnancy; however, it decreases at the third trimester (3-5).

Since the growth of myoma increases in early pregnancy, it can be stated that the growth of myoma during pregnancy is not merely related to the increased level of estrogen. During the second half of pregnancy and in the third trimester, the size of myoma decreases (6). During pregnancy, secondary changes of myoma including necrosis, degeneration, and hemorrhage may occur (1).

Evaluation with sonography before and during pregnancy is the best method to determine the number of myoma, implantation site of placenta, and vascularization of myoma (7). This study aimed to report a rare case of vaginal myomectomy in severe post-partum hemorrhage caused by a submucosal myoma.

2. Case Report

A 39-year-old woman (gravida 2, para 1) who was at 32th week of gestation was referred to the obstetrics clinic. Her husband died after one year of delivery. Her second marriage was one year ago and conceived soon after. No specific problem was observed in the routine prenatal care, and frequent sonographies were performed during pregnancy. These sonographies are as follows:

A sonography was carried out at 7th week of gestation in which the gestational sac with a live embryo was observed. Moreover, on the anterior part of the fundus of the uterus, a 75 mm myoma with a pressure effect on the gestational sac was reported.

Another sonography was conducted at 13th week of gestation with a normal NT, and an 82×84 mm myoma was observed on the left lateral wall of the uterus.

At 21th week of gestation, an anomaly scan was performed. The results of all the examinations were normal. Only mild kidney fullness was reported. The placenta was anterior and the fetal presentation was transverse. A solid mass with a diameter of 90 × 61 mm suggesting myoma was observed on the anterior wall of the uterus.

At 39th week of gestation, the patient was referred to the clinic due to reduced fetal movements. A biophysical profile test was performed. In the biophysical profile sonography, the score was 10. Amniotic fluid index was 79 mm.

A 100 × 100 mm myoma was reported on the anterior wall of the uterus with a pressure effect on the fetal anterior chest wall. Since the fetus was term with decreased fetal movements, termination of pregnancy was decided. The patient was hospitalized and 25 μg of sublingual misoprostol was administered every 4 hours and after 2 doses of drug, she delivered without the need for induction by oxytocin. A 2 kg neonate with an Apgar score of 9 - 10 was born. Much fluid containing blood was removed along with the placenta. In vaginal examination, a large 12 × 12 cc myoma located inside the cervix was palpated that prevented the cervix to be closed and the cervix was fully dilated and effaced. The myoma was protruded and the examinations revealed that the myoma was submucosal and attached to the anterior wall of the uterus; however, it was not pedunculated. The blood and clots were removed from the vagina. The bleeding was controlled and the patient was transferred to the post-partum unit with a blood pressure of 130/90 mmHg and stable vital signs. After an hour, the vital signs were still normal; however, massive hemorrhage and then hypotension (100/70 mmHg) occurred. The patient was transferred to the operating room to conduct further examinations and possible reanimation and laparotomy. Four units of blood were reserved. Initially, the patient was examined in a gynecological position. She suffered severe hemorrhage with some clots. In examination, a 12 × 12 cm submucosal myoma without a base attached to the anterior wall of the cervix was palpable. This myoma was protruded to the cervix. In the assessment of uterine wall, the myoma was removed manually and its bed was nearly 10 × 8 cm on the anterior surface of the endometrium. Fortunately, the uterus was not ruptured. The bleeding was controlled through bimanually compression of the uterus, administration of Methyl Ergonovin and oxytocin, and 800 μ rectal misoprostol. Hemorrhage continued from the bed of the myoma and two long gauzes were packed inside the uterus. The bleeding was then controlled and a Foley catheter was fixed in the bladder. Six hours after the surgery, hematocrit dropped from 34% to 25%. The patient felt severe dizziness during walking. Therefore, two units of blood were transfused and the patient's vital signs were normal. One dafter the surgery, two long gauzes and the Foley catheter were removed. She was discharged with a good general condition.

3. Discussion

The prevalence rate of myoma during pregnancy is 1.2 to 1.7% (8). Generally, a variety of asymptomatic myomas is accidentally diagnosed. In any case, myomas may be accompanied by abortion, premature rupture of membranes, pelvic pain, ineffective labor, malpresentation, C-section, and post-partum hemorrhage (9, 10).

Myomectomy during cesarean section is still debatable. Due to uncontrollable hemorrhage, conducting myomectomy during cesarean section and after delivery can increase the risk of uterine atony and the need for transfusion and hysterectomy. For this reason, except for pedunculated myomas or myomas located in a cesarean incision line, gynecologists often refuse surgery. Therefore, removing myoma may require further surgeries that are associated with increased costs and consumed time (11, 12).

Removing myoma during cesarean section is considered a difficult surgery because blood flow is increased (13, 14). However, in recent years, studies have shown that in special cases, myomectomy can be performed during cesarean section by an experienced surgeon. Several studies indicate that myomectomy during cesarean section is a safe surgery which due to increased elasticity and low-uterine fragility during pregnancy makes the stitching procedure easier (15).

In a study performed by Adnan et al. a number of myomectomies were done during cesarean sections. The smallest myoma was 6 cm and the largest one was 22 cm; sixteen patients underwent myomectomy during their cesarean sections from 2009 to 2012. Two patients required

transfusion; however, hysterectomy was not conducted for any of these patients; uterotonics including ergometrine, oxytocin, misoprostol, and sulprostone were used to decrease bleeding (16).

Some researchers stated that intramural myomas should be removed due to the risk of hemorrhage and atony (9). However, some authors suggested that intramural myomas of the fundus of the uterus and the uterine corn and those located near the tubes should not be removed (15). In a cesarean section in which the patient had a 20 cm subserosal myoma, the myomectomy was accompanied by an increase in the complications during and after the surgery, especially paralytic ileus (9).

3.1. Conclusions

Vaginal myomectomy after natural vaginal delivery or possibly during cesarean section is a safe and reliable method to remove submucosal myomas especially large myomas and decrease the risk of complications and costs of re-surgery. Due to the increased risk of hemorrhage, it is better to conduct this surgery in tertiary referral hospitals.

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