

Acute Abdomen Due to Myoma Degeneration Managed by Myomectomy During the Second Trimester of Pregnancy: Case Report

Miyom Dejenerasyonu Sonucu Akut Batın Gelişmesi Nedeniyle Miyomektomi Yapılan Bir İkinci Trimester Gebelik Olgusu

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ABSTRACT Myoma in pregnancy is common in clinical obstetric practice. However, myomectomy during pregnancy is a rare surgical intervention due to the risk of pregnancy loss, hemorrhage and hysterectomy. Conservative management of symptomatic myomas which consists of bed rest, hydration and analgesics is the first line of treatment in the gravid patient. However, in 2 % of pregnancies complicated with myomas, conservative therapy fails and myomectomy by laparotomy or laparoscopy had to be performed, mainly for unbearable pain or haemoperitoneum. Second trimester gravid myomectomies with favourable outcomes have been reported and there are a few cases of myomectomies in the first trimester with uneventful pregnancy course. We report a case of successful myomectomy presenting with signs of acute abdomen at 16 weeks of pregnancy due to degeneration of myoma resulting in term delivery of a healthy infant.

Key Words: Myoma; pregnancy; abdomen, acute

ÖZET Gebelikte miyom, klinik obstetrik pratikte sık rastlanılan bir durumdur. Ancak, gebelik kaybı, kanama ve histerektomi gibi riskler nedeniyle gebelikte miyomektomi nadir başvuru olan bir tedavi şeklidir. Yatak istirahati, hidrasyon ve analjeziklerden oluşan konservatif yaklaşım tedavide ilk seçenektir. Miyom ile komplike olan gebeliklerin yaklaşık % 2'inde konservatif tedaviye yanıt alınamamakta ve genellikle şiddetli pelvik ağrı veya hemoperitoneum gibi sebeplerle miyomektomi yapılmak zorunda kalınmaktadır. Literatürde, iyi obstetrik sonuçlar bildirilen 2. trimester gebelikte miyomektomi vakaları mevcuttur. Hatta, kısıtlı sayıda da olsa, gebeliğin sorunsuz tamamlandığı 1. trimester miyomektomileri de bildirilmiştir. Bu yazıda, gebeliğin 16. haftasında miyom dejenerasyonu nedeniyle akut batın bulguları ile başvuran ve miyomektomi yapılarak, termde sağlıklı bir bebek doğumuyla sonuçlanan bir olgu sunulmaktadır.

Anahtar Kelimeler: Miyom; gebelik; karın, akut

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The prevalence of myomas during pregnancy is reported to be 0.1-15%.¹ Recently the topic is becoming more relevant in obstetric practice due to the demographic shift towards delayed childbearing, rising rate of obesity, and increased number of pregnancies occurring after the treatment of fibroids. Complications related to gravid myomas are pregnancy loss, pelvic pain, placental abruption, hydronephrosis, premature rupture of the membranes, preterm labour, intrauterine growth restriction, fetal malpresentation, and postpartum hemorrhage.² Pelvic pain is usually associated with the degeneration or torsion of the myoma. In women diag-

nosed to have myomas during pregnancy, clinical symptoms and sonographic evidence of myoma degeneration occurs in approximately 5% of the cases.³ Conservative management of symptomatic myomas which consists of bed rest, hydration and analgesics is the first line of treatment in the gravid patient. However, when these measures fail to alleviate the severe discomfort related to myoma, option of induced abortion followed by myomectomy is presented to the patient.

Another option is myomectomy in an effort to preserve pregnancy. In 2% of pregnancies complicated with myomas, conservative therapy fails and myomectomy by laparotomy or laparoscopy had to be performed, mainly for unbearable pain or haemoperitoneum.⁴

There are a few prospective studies of pregnancy-preserving myomectomies but the literature mainly consists of case reports and retrospective studies. In these studies, myomectomy was generally performed for untractable pain in the second trimester and excellent pregnancy outcomes with very few pregnancy losses were reported.⁵⁻⁸ Also, there are a few reports of myomectomy in the first trimester with preservation of the pregnancy with term and uncomplicated deliveries.^{4,9}

In spite of the risk of uterine rupture that may occur at a time later in pregnancy, myomectomy appears to improve pregnancy outcome and may be an alternative to pregnancy termination in selected cases. Herein we report a case of acute abdomen managed successfully with myomectomy in the second trimester.

CASE REPORT

A 24 years old primigravida was referred to our clinic with severe abdominal pain in the 15 weeks and 3 days of pregnancy. Until that her pregnancy was uneventful except mild pelvic pain at times. Patient had only one prenatal visit before and was not informed about anything extraordinary. Ultrasound examination revealed a live fetus of 15 weeks with normal fetal anatomy and amniotic fluid. A normal appearing placenta was located posteriorly in the uterine cavity. On the right and upper side of

the uterus a solid mass of 66x45 mms. with a heterogeneous echogenicity was noted (Figure 1). The probable diagnosis was a subserous uterine myoma remote from the uterine cavity (>5 mm to endometrial cavity). Laboratory findings were within normal boundaries. Conservative treatment with intravenous hydration, bed rest and analgesics was initiated and the patient seemed to get some relief for a few hours. But unbearable pain with nausea refractory to analgesics started after 6 hours of hospitalization and the patient was presented the option of myomectomy. The couple was informed about the possible complications of the surgery like pregnancy loss, bleeding and hysterectomy. Due to her tremendous discomfort, the patient opted for myomectomy.

A myomectomy was performed via a vertical skin incision. Upon entry into the pelvis, the uterus was in normal position with a subserous myoma of approximately 70x50 mms on the upper right side of the uterus. The myoma had a pedicle of approximately 3.5 cm in width. Intraoperative appearance of the myoma is represented in Figure 2. There were no bleeding and the adnexa appeared normal. After incision of the myoma capsule with electrocautery, the tumor was shelled out with blunt dissection. Uterine cavity was not entered. Uterine incision was closed with multiple layers of Vicryl 1-0 (Ethicon) and complete homeostasis was achieved. Appearance of the myoma after excision is represented in Figure 3. Estimated blood loss was around 200 mL. Fetal cardiac activity was confirmed immediately at the end of the operation and prophylactic depot hydroxy progesterone caproate (Proluton depot injection 500 mg/2 mL amp. IM) was administered. Patient experienced no vaginal



FIGURE 1: Preoperative sonographic appearance of the myoma.



FIGURE 2: Intraoperative picture of the myoma.
(See for colored form <http://jinekoloji.turkiyeklinikleri.com/>)

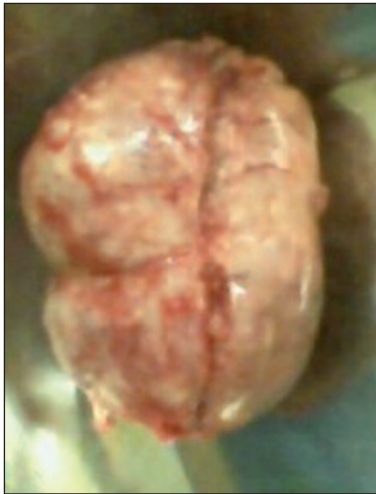


FIGURE 3: Appearance of the myoma after excision.
(See for colored form <http://jinekoloji.turkiyeklinikleri.com/>)

bleeding and was discharged after four days of postoperative follow up. Postoperative histopathologic examination reported leiomyoma of the uterus with signs of haemorrhage and hyaline degeneration. Fetal status was reassured before discharge and the patient received the rest of her antenatal care in our institution. The course of the pregnancy was uneventful until the last week of pregnancy when symptoms of intrahepatic cholestasis occurred. The patient delivered a healthy, female baby of 4010 g at 40th week of gestation by cesarean section. She was discharged after two days of un-

complicated postpartum follow up. An informed consent of patient for publication of case report was obtained.

DISCUSSION

Leiomyoma is the most common benign uterine tumor in the women of reproductive age. It may disturb the pregnancy and evoke risk of abortion and sometimes may lead to unbearable pain and discomfort to the mother. However, traditionally myomectomy during pregnancy is reserved for severe cases and physicians are generally reluctant to operate a gravid patient due to the potential risks of the surgical procedure.

Lolis et al. proposed the criteria for myomectomy during pregnancy as follows: (1) rapidly growing leiomyoma causing discomfort; (2) severe abdominal pain that did not respond to conservative management; (3) a distance between the leiomyoma and the endometrial cavity >5 mm, in order to avoid opening of the endometrial cavity; and (4) the provision of the signed consent form, after the patients had been informed of the risks of the surgical intervention.⁶

Myomectomy in the second trimester is regarded to be safe and effective particularly in cases where there is no connection of the myoma to the uterine cavity. Some reports indicate that, cases treated surgically may even have better pregnancy outcomes than the ones managed conservatively. There are some reports on successful gravid myomectomies in the first trimester, too.

Celik et al. reported five cases of successfully managed gravid myomectomies in the second trimester.⁷ Myomectomies were performed due to failure of conservative management for the pain and discomfort of the leiomyoma. They had five term deliveries by cesarean section. Bonito et al. reported another series of five cases of myomas resistant to conservative management in the first and second trimester.¹⁰ They had three spontaneous deliveries and two cesarean sections and five healthy babies at term were born without complications.

In a prospective study of 106 cases with symptomatic myomas in pregnancy, regardless of the

gestational age; pregnancy loss, premature rupture of the membranes, preterm labour, and post cesarean hysterectomy were less frequently encountered in myomectomy group compared to the conservatively managed group. The gravid myomectomy group had even better outcomes in terms of risk of spontaneous abortion, intrauterine growth restriction and postcesarean hysterectomy compared to the patients who do not have myomas. In that study; the cesarean section rate was reported to be 93.7%.⁵ However, Bhatla et al. suggested that labor should be induced in patients in which the uterine cavity was not opened during myomectomy and reported successful vaginal delivery in such cases.¹¹

In a prospective cohort study of 16 symptomatic myomas during the second trimester of ges-

tation, 13 cases were treated surgically and three with expectant management. There were 12 live births in the myomectomy group with one spontaneous abortion, while one of the three patients managed expectantly aborted.⁶

Leach et al. reported a successful first trimester myomectomy due to pelvic pain, constipation and urinary retention.⁹ Two leiomyomas were removed at 11 weeks of gestation and a term healthy infant was born. A case of acute abdomen resulting from the torsion of a pedunculated subserous myoma and managed by myomectomy in the first trimester of pregnancy was reported by Aynioğlu et al.¹² The patient was operated with a presumptive diagnosis of acute appendicitis but a successful myomectomy was undertaken and the patient delivered vaginally at term.

TABLE 1: Summary of studies, case series and case reports of myomectomies during pregnancy.

First author	Study design	No. of cases	Indications for myomectomy	Gestational age at time of operation	Obstetric outcome
Mollica G	Prospective	18	Recurrent pain, large or rapidly growing myomas, myomas in lower uterine segment	10-19 weeks	Pregnancy loss :0 PPROM: %5 PTL:%5.6 Post-C/S hysterectomy: 0
Lolis DE	Prospective	16	Rapidly growing myomas, Remote from the uterine cavity >5 mm	15-19 weeks	Pregnancy loss:8.7% SAB:1 PPROM: 1 (requiring hysterectomy) Placenta previa:1 (requiring C/S)
Bonito M	Case series	5	Symptomatic myomas resistant to conservative management	First and second trimester	Spontaneous delivery: 3 C/S: 2
Çelik C	Case series	5	Symptomatic myomas resistant to conservative management	Mean GA 18 weeks	Mean gestational age at delivery is 39 weeks
Aynioğlu Ö	Case report	1	Acute abdomen due to torsion of the myoma	12 weeks	Vaginal delivery at term
Öztürk HB	Case report	1	Acute abdomen due to torsion of the myoma	21 weeks	Uneventful course of pregnancy
Bhatla N	Case report	1	Symptomatic myomas (pain, subacute intestinal obstruction, anemia) resistant to conservative management	19 weeks	Vaginal delivery at 38 weeks
Doerga-Bachasingh SR	Case report	1 (twin gestation)	Intrabdominal bleeding from the myoma	10 weeks	Emergency C/S at 36 weeks due to placental abruption
Danzer E	Case report	1 (twin gestation)	Symptomatic myomas resistant to conservative management	12 weeks	C/S at 37 weeks, hydrocephalus and limb anomalies in one twin

C/S: Cesarean section; PPRM: Premature preterm membran rupture; PTL: Preterm labor; SAB: Spontaneous abortion.

A new surgical technique for the gravid myomectomies was recommended by Suwandinata et al.² A midline abdominal incision for adequate exposure was favoured. They have suggested that massive bleeding requiring blood transfusions can be prevented by placing interrupted sutures around the myoma to obliterate the blood vessels encircling the myoma. They have emphasized the proper closure of the defect resulting from the enucleation of the myoma to maintain hemostasis. They have also recommended to avoid controlled hypotensive anaesthesia or tourniquets and local injection of vasoconstrictive agents.

There are also a few reports of first trimester myomectomies in twin gestations. Doerga-Bachasingh et al. performed a successful first trimester myomectomy of a bleeding myoma in twin pregnancy.⁴ The patient had healthy babies with cesarean delivery at 36 weeks of gestation. However, Danzer et al. reported limb anomalies and hydrocephalus in one of the fetuses after myomectomy

in a twin pregnancy. There were signs of placental haemorrhage, thrombosis and infection in the affected twin. They concluded that placental trauma and haemodynamic alterations might be the possible cause of the fetal malformation.¹³ Thus, safety of the first trimester myomectomies need to be confirmed by further prospective studies. A summary of the studies, case series and case reports of myomectomies during pregnancy are represented in Table 1.

CONCLUSION

Available data supports gravid myomectomy when symptoms can not be alleviated by conservative measures. We presented a successful case of myomectomy in early second trimester. After careful evaluation of the imaging studies, cases refractory to conservative treatment should be counseled about the surgical management. Myomectomy may be undertaken in selected cases with good obstetric outcomes in the second trimester.

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