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Successful 15 Weeks Pregnancy-Preserving Myomectomy in a 35 Years Old Primigravida Presenting a Red Degeneration of Anterior Intramural Corporeal Fibroid and Live Birth at Term: Case Report

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ABSTRACT

Pain due to red degeneration of fibroid during pregnancy is usually associated with large myomas. Necrobiosis / red degeneration typically manifests itself about midpregnancy when the leiomyoma suddenly becomes acutely painful, enlarged and tender. The common differential diagnoses of this condition are torsion of the pedicle of an ovarian cyst / a leiomyoma, abruption placentae, acute pyelitis or any abdominal catastrophe. Ultrasound can easily delineate the presence of myomas of mixed echogenicity along with pregnancy and clinical findings usually suggest the diagnosis of pregnancy complicated by red degeneration of fibroid. The acute pain usually subsides within 3 - 10 days of conservative treatment. Only refractory cases (2% of patients) may demand surgical intervention in early gestation with the known risk of miscarriage. Here we report a pregnancy managed at 15 weeks by *myomectomy for red degeneration causing severe tender enlarged painful gravid uterus non responding to conservative treatment during 6 days*. The patient ultimately delivered a healthy male child weighing 3.500 gr at 39 weeks by lower segment caesarean section.

Key words: early pregnancy, red degeneration, myomectomy, cesarean section live birth 3.500 mg.

INTRODUCTION

The prevalence of uterine fibroids is estimated at 20-50% in women of reproductive age (Chauveaud-Lambling and Fernandez, 2004). The occurrence of fibroids in pregnancy is increasing (Lopes, Thibaud, Simonnet and Boudineau, 1999; Ouyang, Economy and Norwitz, 2006). This is likely due to the high prevalence of leiomyomata in black population and the advancing age at first pregnancy which is often being delayed past age 30 (Huyck, Panhuysen, Cuenco, Zhang and Goldhammer, 2008).

The effect of fibroids on pregnancy has been noted in several studies (Lopes, Thibaud, Simonnet and Boudineau, 1999; Celik, Acar, Cicek, Gezginc and Akyurek, 2002; Bukulmez and Doody, 2006). This effect is responsible for complications in 10 to 30 % of cases and includes spontaneous abortion, premature rupture of fetal membranes, antepartum and postpartum hemorrhage, malpresentations, preterm delivery, placenta preavia, placental abruption and labor dystocia (Bukulmez and Doody, 2006).

These complications are often seen by obstetricians and cause management dilemma. Although most authors recommend medical management, some complications will require surgery (Ouyang, Economy and Norwitz, 2006; Bhatla, Dash, Kriplani and Agarwal, 2009). Several authors have described myomectomy during pregnancy, but circumstances of discovery, management and outcomes vary (Bhatla, Dash, Kriplani and Agarwal, 2009; Lolis, Kalantaridou, Makrydimas, Sotiriadis, Navrozoglou, Zikopoulos and Paraskevaidis, 2003; Lozza, Pieralli,

Corioni, Longinotti and Penna, 2011; Ompalingoli, Eouani, Kombo, Nzengomona, Mambou, Sibi and Kie, 2011.

In this case report, we present a case that had successful surgical management of a complicated intramural myomata by red degeneration at 15 weeks gestation with continuation of the pregnancy and delivery at term without complications

Red degeneration of myoma usually responds to conservative treatment: opioid analgesics, to colytic and empirical progesterone therapy. 'According to Lolis et al indications for myomectomy during pregnancy include severe abdominal pain due to torsion of subserous pedunculated myomas or red degeneration not responding to medical treatment, and an increase in myoma size causing abdominal discomfort. Khalil E. et al. (2006) reported a case of a red degeneration during pregnancy complicated by uterine rupture.

Myomectomy may be indicated when the pelvis is totally or partially blocked by a fibroid growing from the cervix or lower uterine segment. Here we report the outcome of a pregnancy complicated by red degeneration of fibroid managed by myomectomy at 15 weeks' gestation. She delivered a healthy male child weighing 3.500 kilograms at 39 completed weeks by low transverse segment caesarean section.

CASE REPORT

A 35 years old nulliparous woman, working as teacher in primary level school presented first time for increasing lower abdominal mass and pain without amenorrhea. Clinically she was healthy and there was no other complaint. Ultrasonogram showed an increased uterus with an intramural corporeal anterior myoma of size 5cm/4cm/3cm. There was no pregnancy. Because of the large size of myoma and after counseling of eventual complications of pregnancy, the better management was to perform myomectomy before pregnancy. As the patient had not accepted the proposition of myomectomy, she has been treated successfully conservatively by analgesics and bed rest during 5 days.

Four months after, the patient and her partner consulted for severe pelvic pain and amenorrhea.

An ultrasonography performed showed a single intrauterine alive pregnancy of 14 weeks' gestation and a posterior placenta grade 0, anterior intramural corporeal myoma with heteroechoic structure and some hypoechoic areas suggestive red degeneration complication of myoma, with size of 6.5 cm/5.6 cm/. The patient was ill-looking, clinically no pale. The pulse rate was 90 beats per minute and the blood pressure was 100/70 mmHg. The respiratory rate was 18 cycles per minute. The patient was admitted into the ward and managed conservatively with bed rest, hydration and analgesics, and after 5 days of treatment, there was no improvement in the symptoms.

Picture 1: Anterior intramural corporeal myoma of size: 6.56 cm/ 5.65 cmwith red degeneration complication G1P0 35years: Fetalbiparietal diameter of 14 weeks' gestation posterior placenta grade 0.

The couple was then counseled for abortion followed later by myomectomy as a last resort according to existing protocol, but refused the loss of pregnancy.

Myomectomy during pregnancy was the choice of the couple. The risks of possible spontaneous abortion and severe hemorrhage and possible hysterectomy following the procedure were explained to the couple, who accepted these risks, and

after informed consent, the patient was worked up for surgery. Pre-operative FBC, urea, liver and kidney tests, coagulation profile were normal and two units of blood were grouped and cross matched (she was B positive BGRH). November 7th 2017, at 15 weeks' gestation, a myomectomy was decided and performed under spinal anesthesia.

A vertical skin incision with less risk of uterine manipulation was performed. The uterus was found to be displaced into the right lower quadrant by the intramural myoma at the left anterior side. Mixed lidocaine and adrenaline was injected into the capsule of myoma to minimize operative blood loss.

A transverse anterior corporeal incision with right and left extension was done. Findings at surgery were: a bulky gestational uterus with a large intramural myoma of 6 cm x 5.5 cm in size in the interior uterine wall. The right ovary was normal in size while the left ovary was enlarged with an intact corpus luteum. The myoma was removed without rupture of membranes of gestational sac, and entering into the uterine cavity. Following removing of myoma, the resulting cavity was obliterated by carefully approximating the myometrium (using vicryl 1 on round bodied curve needles), in three layers over the wall of the gestational sac. The uterine serosa was repaired by imbrications with vicryl 1 on a round body needle. The blood loss was 250 mls. The myoma was weighing 300g (Figure 2 and Figure 3) and measured 6cm x 5.5 cm. Post-operatively she had intravenous ampicillin 1gm eight hourly for 72 hours, gentamicin 160 mg 24 hourly for 72 hours. She also had Diclofenac intramuscularly 75 mg 12 hourly for pain relief for 48 hours and intravenous salbutamol infusion: 500mcg in 500mls of Normal saline given over six hours for 48 hours post operatively to relax the uterus.

Picture 3: Extraction of myoma and preservation of associated pregnancy

Although there was no disruption of the corpus luteum during surgery, utrogestan (progesterone) supplementation was administered for one month, starting with 200mg eight hourly for one week and 200 mg 12 hourly for four weeks post operatively.

The patient had an uneventful post operative period and was discharged home on the 7th post operative day after she was registered for antenatal care. Her antenatal period was largely uneventful with a total of ten visits. Obstetric ultrasound scan was done four times subsequently at 20, 32, 36 and 39 weeks and all were normal. She was counseled for elective caesarean section at term which was performed successfully at 39 weeks, April 26th,20148 at which date she delivered a live male 3.500gr neonate with Apgar scores of 10 (Picture 4).

Picture 4: Post-extraction anterior myoma and remaining pregnant uterus with posterior placenta

Picture 5: Extracted anterior myoma 300 gr/ 6cm/5.5cm

Picture 6: Vertical skin incision for Caesarian section

Picture 7: Low segment transversal cesarean section at 39 weeks' gestation

Picture 8: Male baby at 39 weeks Apgar 10 10 10 weighing 3,500 gr

The patient had a normal post-operative recovery and experienced a normal puerperium discharged at day seven with breast feeding healthy baby.

Dr. A. Gakwavu performing myomectomy during pregnancy and cesarean section at 39 weeks' gestation

DISCUSSION

The incidence of complications of leiomyomata in pregnancy has been estimated to be 10-40%, including threatened abortion, premature labor or aseptic necrosis (Chauveaud-Lambling and Fernandez, 2004; Lopes, Thibaud, Simonnet and Boudineau, 1999). Most authors recommend medical treatment because of the high risk of spontaneous abortion or bleeding complications with surgical management (Bhatla, Dash, Kriplani and Agarwal, 2009). However in some cases, myomectomy in pregnancy may become an

unavoidable necessity (Bonito, Gumeli, Basili and Roselli, 2007; Tae-Hee and Hae-Hyeog, 2011; GakwavuAndre 2014). What leads to performing myomectomy in pregnancy varies. Our case at 14 weeks gestation presented with an acute abdominopelvic pain associated with increased monofetal gravid uterus as 20 weeks associated with myoma. For several authors as Celik (Celik, Acar, Cicek, Gezginc and Akyurek, 2002), (Kaddioui, Khachani, Idrissi, Alami, Chraibi, Bezad and Alaoui, 2009), Tae-Hee (Tae-Hee and Hae-Hyeog, 2011), acute abdomen due to necrosis of myomata as our patient or to the torsion of a pedunculated myoma were often the reasons for surgical intervention. The decision for surgical management of myomata during pregnancy must sometimes be considered in such situations (Ouyang, Economy and Norwitz, 2006;; Tae-Hee and Hae-Hyeog, 2011).

The measures taken to ensure successful myomectomy during pregnancy vary. While myomectomy on a non-gravid uterus could involve the use of oxytocin or ligation of uterine artery to minimize blood loss during surgery (Lansac, Body and Magnin, 2011), none of these measures can be used because of the ongoing pregnancy. Many authors have reported successful of myomectomy during pregnancy when the fibroids are subserosal and when the pregnancy is in the first trimester (Ouyang, Economy and Norwitz, 2006; Kaddioui, Khachani, Idrissi, Alami, Chraibi, Bezad and Alaoui, 2009; Ompalingoli, Eouani, Kombo, Nzengomona, Mambou, Sibi and Kie, 2011). As our previous case in January 2014 and actual case in November 2017, the early gestation and decision of myomectomy increased the chance for successful removal of intramural myomata. Fortunately, at this early time of pregnancy, the gestational sac is relatively small and the uterus is thick enough to permit the myomectomy (Bhatla, Dash, Kriplani and Agarwal, 2009; Tae-Hee and Hae-Hyeog, 2011).

In contrast, authors as Bonito and Celik (Bonito, Gumeli, Basili and Roselli, 2007; Celik, Acar, Cicek, Gezginc and Akyurek, 2002) have successfully performed myomectomies respectively in the second and third trimesters of pregnancy. In their reported cases, the myomata were subserous.

The success can be enhanced by measures taken to prevent induced abortion post operatively by the use of uterine relaxants (Ompalingoli, Eouani, Kombo, Nzengomona, Mambou, Sibi and Kie, 2011; Gakwavu Andre 2014). Also, in our two cases January 2014 and November 2017, excess manipulation of the uterus intra operatively was avoided by practice of medial vertical skin incision.

Caesarean section in our two cases was performed at 39 weeks gestational age, but it can be done between 34 to 39 weeks gestation if necessary. The route of delivery, according to most authors must be caesarean section, which can be done through the uterine lower segment if it is accessible (Lolis, Kalantaridou, Makrydimas, Sotiriadis, Navrozoglou, Zikopoulos and Paraskevaidis, 2003; Okonkwo and Udigwe 2007; Aziken, Osemwenkha, Orhue, Afinotan, Osughe and Irihogbe, 2008, Gakwavu Andre 2014 and present reported case in 2017). Vaginal delivery after myomectomy may be contraindicated because of the high risk of uterine rupture in labor (Bhatla, Dash, Kriplani and Agarwal, 2009). The five cases of myomectomy in pregnancy reported by Celik (Celik, Acar, Cicek, Gezginc and Akyurek, 2002) which were performed during the third trimester of pregnancy, were all delivered by cesarean section. Our two cases of myomectomy at 12 weeks 2014 and at 15 weeks 2017 were delivered also by cesarean section. By contrast, in Bonito's series of five patients with myomectomies done during first and second trimester of pregnancy, three of them (60%) delivered vaginally while the other two (40%) underwent cesarean section (Bonito, Gumeli, Basili and Roselli, 2007). Mollica reported 93.7% cesarean section

rate in his series of 18 patients who underwent myomectomy during pregnancy. He concluded that myomectomy during pregnancy and its outcome is best when performed early on selected patients.

The choice of cesarean section as delivery route was determined by the depth and number of myomata removed (Mollica, Pittini, Minganti, Perri and Pansini, 1996). In our 2 cases (2014 and 2017), the myoma was deep as intramural. Vaginal birth may only be considered when myomata were subserosal and the myomectomy was performed in the first or early second trimester of pregnancy.

CONCLUSION

Myomectomy during pregnancy may become an unavoidable option in rare occasions. It should be performed only in selected cases where the patient's condition requires immediate intervention. Chances of success are improved if the myomectomy is performed during the first trimester of pregnancy and if it involved subserosal myomata. Cesarean section is the preferred delivery route after myomectomy in pregnancy.

The case reported of successful intramural myomectomy - preserving early pregnancy complicated by red degeneration leiomyomata is the second case similar to the first reported in 2014 (Successful First Trimester Pregnancy-Preserving Myomectomy in a Woman Presenting a Large Symptomatic Intramural Leiomyoma and Live Birth at Term: Case Report). Myomas are often encountered during pregnancy but the role of myomectomy during pregnancy is still debatable. Pain producing myomas usually respond to conservative treatment. Subserosal large myomas refractory to non-surgical manoeuvres may require surgical removal to relieve pressure symptoms. Review of carefully selected cases of myomectomy in early pregnancy has revealed both good maternal and foetal outcome. The anaesthetic risks have to be minimized as much as feasible. Optimum analgesia and empirical hormone therapy should be ensured in the immediate post-operative period. The antenatal period subsequent to myomectomy requires utmost vigilance and surveillance for the resurgence of pain in any remaining or newly forming myomas.

These measures may ultimately lead to a successful reproductive outcome. A prospective study about the eligibility of women to undergo successfully myomectomy during pregnancy and cesarean or vaginally delivery after myomectomy will be the next step of our research,

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