

## Case Report

Myomectomy in the 14<sup>th</sup> week of pregnancy - case report

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## Summary

Uterine leiomyomas are the most common benign tumours in women. During the pregnancy, their prevalence is 2%. The management of leiomyomas in this period is eminently clinical, except in special situations. The decision by the indication of concomitant surgery pregnancy is complicated because in addition to the anaesthetic risks, studies show worse fetal prognosis. In this study, a rare case of myomectomy was reported in a 14-week gestation due to acute abdomen with intense pain. A 36-year-old primigravida was admitted to the Maternity emergency room, with severe abdominal pain, especially in the right hypochondrium and right flank, for 3 days. Ultrasonography showed leiomyoma measuring 15×11.4 cm. Exploratory laparotomy was performed with myomectomy. After surgery, pregnancy progressed normally until the 37th week, when the patient developed pre-eclampsia. At the opportunity, a caesarean section was performed. The new born was born healthy, weighing 3031g and Apgar 9 and 10. The decision to perform myomectomy is complicated and controversial. Its accomplishment is considered especially when all the other non-surgical therapies have failed, persisting or increasing pain. However, it should be considered the choice of surgery because of possible abdominal surgical complications in pregnancy.

**Key words:** Uterine leiomyomas; Benign tumours; Myomectomy; Pregnancy complications.

## Introduction

Uterine leiomyomas are the most common benign tumours in women [1]. They are estrogen-dependent tumours formed by smooth muscle and vascular conjunctival stroma [2]. The prevalence of this condition during pregnancy is about 2% [3]. Although during pregnancy most patients remain without symptoms, but some may exhibit them. Among these, the most common is known as “painful syndrome of leiomyomas during pregnancy” present in 10% of cases and characterized by: localized pain, nausea, vomiting, low fever, leucocytosis, and increased uterine activity, lasting on average ten days after its start and occurring especially in the late first and early second trimesters of pregnancy, a period in which there is the greatest tumour growth [4, 5]. The probable cause of the pain is red degeneration, in cases of large or subserosal myomas [5].

During pregnancy, the management of leiomyomas is eminently clinical, mainly through the use of NSAIDs. However, special situations may require opioids, epidural anaesthesia, and even surgical management with myomectomy [6]. The decision for surgery indication in treatment of fibroid concurrent with pregnancy is complicated because in addition to the anaesthetic risks, studies show worse fetal prognosis [7]. The choice of surgical technique must be specialized for each patient and depends on the team’s experience [8].

This study reports a rare case of myomectomy in 14 weeks of pregnancy due to acute abdomen with intense pain symptoms. Surgical management, postoperative man-

agement, and gestation follow-up are described.

## Case Report

A 36-year-old primigravida, was at a gestational age of 13 weeks according to ultrasound performed during the first trimester and ten weeks, according to the last menstrual period, when she was admitted to the maternity hospital of the Federal University of Piauí on May 8, 2017. She referred important abdominal pain, mainly located in the right upper quadrant and right flank, which had started three days prior, and intensified in about the last 19 hours, continuously, which did not cease with common analgesia. She had an ultrasound image that showed a leiomyoma measuring 15×11.4 cm. At admission, physical examination identified a diffusely painful abdomen, Blumberg and Murphy positive, palpable mass, painful in the right epigastric and right hypochondria region tending to the right flank.

The patient was admitted for conduction of the analgesia, using tramadol, and diagnostic investigation, proceeding with laboratory tests and imaging tests. Two ultrasound (one gestational and one total abdominal) were performed, and both presented abnormal myomatous nodulation (Figure 1). Abdominal MRI was also performed to rule out other possible diagnoses of acute abdomen during pregnancy. The MRI showed gravid uterus with myomatous nodules, one of these highlighted by higher volume in the right fundic wall, subserosal, sessile, measuring 14.3×13×12 cm with cystic areas in between, corresponding to degeneration. Laboratory tests were within normal limits, except for C-reactive protein. The diagnosis of subserosal leiomyoma, large and symptomatic was made and surgical program was formulated to perform myomectomy and a free and informed consent form was signed by the patient.



Figure 1. — Leiomyoma ultrasound image in the right side fundic wall.

The surgery was performed on May 17, 2017, under spinal anaesthesia and with a longitudinal incision. In inventory cavity was observed gravid uterus with a few small myomatous nodules, one of them was a massive subserosal lump. A myomectomy was carried out with the aid of an electric scalpel and a discrete intramural component was observed, being the leiomyoma predominantly subserosal (Figure 2).

The leiomyoma was excised without reaching the endometrial cavity and without significant blood loss. The leiomyoma presented areas of degeneration, weighing 1,264 grams and was sent to for histopathological examination. The uterus suture was performed with U stitches apart, as well as the aponeurosis, to ensure safety with advancing abdominal strain due to pregnancy. The surgery was uneventful (Figure 3).

The patient evolved well in the immediate postoperative period and in the first days, without complications. Micronized progesterone and symptomatic drugs were prescribed. Gestational ultrasonography was conducted to evaluate control of the fetus post-surgery, which showed live fetus, weighing 125 grams, and biometrics 15sem2d. On the fifth postoperative day, the patient was discharged with guidelines and outpatient follow-up in the



Figure 2. — Laparotomy intraoperative showing the time of exposure of massive leiomyoma.



Figure 3. — Suturing performed of the gravid uterus after myomectomy.

prenatal ward of the hospital.

Prenatal follow-up occurred without further abnormalities until the 37<sup>th</sup> week, when the patient developed preeclampsia and was hospitalized. On that occasion, a caesarean section was decided. The new born, female, was healthy, weighing 3,031 grams. She presented Apgar scores of 9 and 10, in the first and fifth minutes, respectively. The patient and the new born were discharged two days after surgery.

## Discussion

The main diagnostic method of uterine leiomyomas during pregnancy is prenatal ultrasonography; it allows the detection - with high sensitivity and specificity [2] - and the monitoring of these masses during pregnancy. However, when the patient is asymptomatic, the lack of systematic demand for this disease can lead to underdiagnosis [8].

The main symptomatology resulting from leiomyomas is the "painful syndrome of leiomyomas in pregnancy", which may be accompanied by nausea, vomiting, and fever [9]. The pathophysiology of this syndrome is not yet clear but it is associated with the rapid increase of the tumour, a growth that occurs in about 20% of all reported cases of leiomyomas in pregnancy, especially in the first and second trimesters, causing red degeneration due to haemorrhagic infarction of parts of leiomyoma due to lack of proportional vascularization [4, 10, 11].

The treatment is eminently clinical outpatient, especially using NSAIDs, however in case of presence or increase of symptoms, hospitalization with prescription of opioids, epidural analgesia, or surgical approach can be used [12].

The decision to perform myomectomy is complicated and controversial. Its realization is considered when all other non-surgical therapies have failed, persisting or increasing painful symptoms [13], in cases of at least 15 mm from the lesion to the endometrial cavity [6], and large volume fibroids that may deform the placental site [17]. However, consideration should be given to possible abdominal surgical complications in pregnancy, such as abortion, bleeding in the first half of pregnancy, preterm labour, and placental abruption [8]. In studies, the best successful rates in gestational myomectomy vary from 2% to 16% of pregnancies [6, 14-16]. It is known also that myomectomy significantly increases elective caesarean rates [17].

During the procedure, the two main complications are: abortion and haemorrhage [6]. Thus, it is up to the physician and the patient to decide together the procedure, assessing the risks and benefits, and knowing that the extension of emergency surgery can compromise both maternal and fetal life.

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