



A Silent Rupture of Previous Myomectomy Scar in a Full Term Pregnancy: A Case Report

Benshrir Ibtissam, Mahfoud Hounaida, Tayb Roghaya, Baidada Aziz

Department of Gynecology and Obstetrics, Mohammed V University, Rabat, Morocco

Email: ibtissam.benshrir02@gmail.com

How to cite this paper: Ibtissam, B., Hounaida, M., Roghaya, T. and Aziz, B. (2024) A Silent Rupture of Previous Myomectomy Scar in a Full Term Pregnancy: A Case Report. *Open Access Library Journal*, 11: e11437.

<https://doi.org/10.4236/oalib.1111437>

Received: March 14, 2024

Accepted: April 15, 2024

Published: April 18, 2024

Copyright © 2024 by author(s) and Open Access Library Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Uterine rupture is a severe obstetric complication. The most common risk factor is previous uterine surgery such as myomectomy. Timely diagnosis and prompt intervention are crucial to reduce the high rates of perinatal morbidity and mortality. In this case report we present a 38-year-old lady with a full-term pregnancy and a history of myomectomy. Presented to the obstetric emergency department at the beginning of labor. During the cesarean, a uterine rupture was found on the scar of the previous myomectomy. Myomectomy is a common risk factor for spontaneous uterine rupture during pregnancy. Through literature, we try to estimate the incidence of uterine rupture, the clinical symptoms of this complication, and the surgical treatment proposed. In conclusion, uterine rupture after prior myomectomy is still hard to predict. Patients should be informed of this risk before conception and decide the mode of delivery. Obstetricians must remain vigilant toward any pregnancy with a history of myomectomy.

Subject Areas

Gynecology, Obstetrics

Keywords

Uterine Rupture, Myomectomy, Pregnancy, Labor

1. Introduction

Uterine fibroids also known as leiomyomas are benign soft-tissue neoplasms that arise from smooth muscle. They represent one of the most common gynecological conditions affecting women of reproductive age worldwide. Uterine myomas are clinically observed in 20% to 25% of women of reproductive age. [1] Thirty percent of cases are associated with significant morbidity, including me-

norrhagia, anemia, abdominal discomfort, pelvic pain, and reproductive dysfunction. [1] [2] Myomectomy, the surgical removal of fibroids while preserving the uterus, remains a cornerstone in the management of symptomatic fibroids, offering relief of symptoms and preserving fertility.

The main risk factor for uterine rupture is previous uterine surgery including myomectomy. 31% of uterine ruptures occurred in women who had a history of prior uterine surgery [3].

Accordingly, uterine ruptures are life-threatening obstetric emergencies, even if infrequent, remain a topic of ongoing study due to the high rates of perinatal morbidity and mortality they can lead to.

2. Case Presentation

A 38-year-old pregnant patient, Primigravid with normal prenatal biological tests and an ultrasound done at 34 weeks of gestation showed a eutrophic fetus in breech presentation with a history of myomectomy performed by laparotomy two years ago. Presented to the emergency department in labor with a full-term pregnancy.

Upon examination, the patient exhibited normal blood pressure, was afebrile, and had a body mass index (BMI) of 30. The patient presented two contractions every ten minutes and a fundal height of 30 cm.

An emergency cesarean section was decided due to the myomectomy scar on a breech fetal presentation.

During the cesarean section, after the extraction of the fetus, we found a uterine fundal rupture covered by a utero-epiploic adhesion extended to the uterine cavity. (Figure 1 and Figure 2)

Hysterorrhaphy and the uterine rupture of the myomectomy scar are done by double-layer sutures and closure of the peritoneum. No postpartum complication was noted.

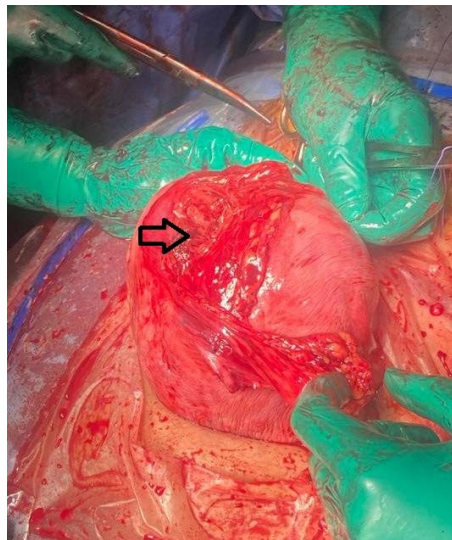


Figure 1. Uterine rupture covered by the omentum.



Figure 2. Removing the utero-epiploic adhesion: A uterine rupture that extends into the uterine cavity.

3. Discussion

Uterine rupture may be on a scarred or unscarred uterus, spontaneous or traumatic. Traumatic rupture can be caused by artificial delivery or instrumental such as curettage. Spontaneous ruptures can occur either on a previous surgical procedure or on an intact uterus. We will focus on ruptures following myomectomy, which are spontaneous. The incidence of uterine rupture varies according to geographical area, with estimates ranging from 1/1000 to 1/2000 births in France, 1/93 in Uganda, 1/44 in Burkina Faso, and 1/51 in Senegal. This disparity reflects differing socioeconomic conditions and levels of medical supervision. Among spontaneous ruptures, only 17% occur before the start of labor. [4]

According to Gambacorti-PasseriniZ's literature review including 23 studies, reporting 2367 pregnancies after prior myomectomy, the incidence of uterine rupture after myomectomy in the included studies was 0.93% specifically, it was 0.47% in women undergoing trial of labor after myomectomy, and 1.52% in women before the onset of labor. [2]

Also, Ahltop describes 20 instances of uterine rupture among 1300 pregnancies following myomectomy, for an incidence of 1.5%. [5] [6] [7]

Overall, the incidence of uterine rupture during pregnancy with prior myomectomy is similar to the incidence of uterine rupture on a uterus scarred by a previous cesarean. [2] [5] [6]

Several studies have discussed details of the myomectomy surgery as risk factors for uterine rupture such as the opening of the uterine cavity during the procedure, the size of the fibroid, the suture technique, the use of diathermic coagulation which seems to influence the obstetric decisions [2] [6].

Laparoscopic myomectomy was discussed by many studies as a risk factor for uterine rupture [3] [4] [5] [6] which can be explained by the suturing technique

used in laparoscopic myomectomy is inferior to myomectomy site closure during an exploratory laparotomy. [4] However, the Walsh review of the literature concluded that the risk of uterine rupture in pregnancy following laparoscopic myomectomy is no higher than 1% if performed by an expert surgeon [6].

As for the recommended time interval for pregnancy after myomectomy, Margueritte. F did a systematic review of the literature published in 2021 including 3000 pregnancies after myomectomy performed via the vaginal route, laparotomy, laparoscopy, or robot-assisted surgery. Through this study, the minimum interval time advised was 2 months before trying to conceive in order to avoid complications and to let the uterus heal. One-third of the patients were advised to delay attempting to conceive for 3 to 6 months and another third for 6 to 12 months. The review concluded that there are no specific guidelines for the optimal time interval between myomectomy and pregnancy and that the Risk of uterine rupture is not correlated with this time interval. [8]

Clinically, Not all uterine ruptures present with the typical picture of abdominal pain, hypovolemia causing hemoperitoneum with shock, and vaginal bleeding. The fetal heart rate may also be altered with late deceleration or bradycardia in 80% of cases, with maximum fetal death in utero. [4] [6]

Complementary examinations should not delay diagnosis: a normal ultrasound scan does not rule out a diagnosis.

Treatment of uterine rupture is based on emergency laparotomy after hemodynamic stabilization. After delivering the baby and the placenta, the hemorrhage must be controlled. Once the uterine anatomy is identified, which can be sometimes distorted, the obstetrician has to decide whether the rupture can successfully be repaired or a hysterectomy is necessary. The surgical procedure must take into consideration the extent of the lesions, the location of the rupture, the patient's age, parity, desire for future pregnancy, and ethnic origin. In general, conservative treatment by hysterorrhaphy is chosen, which preserves reproductive function, especially in patients who wish to have further pregnancies. Hemostasis by ligation of the uterine and/or hypogastric arteries may be necessary. Uterine retraction can be stimulated by intramural injection of oxytocin. The prognosis for both mother and fetus can be fatal, usually due to a delay in appropriate management, as a result of a lack of urgent joint action by all those involved in the hospital system. Management must be multidisciplinary, involving obstetricians, anesthetists, and pediatricians. [5] [9]

Our case report concerns a uterine rupture discovered by incident. Cesarean section was indicated for a breech presentation on a scarred uterus in a Primigravid who came to the emergency department at the beginning of labor.

The patient was free of metrorrhagia, with stable hemodynamics and a normal fetal heart rate.

The patient did not have a report of her myomectomy performed two years ago, but she did give us the result of the anatomopathology of this myomectomy, which was a 4 cm intramural fundic fibroma.

Given the clinical picture, we can't say when the rupture was established. The sudden pelvic pain of rupture may be masked by uterine contractions.

4. Conclusion

In conclusion, uterine rupture following myomectomy is a serious and difficult-to-predict complication. It can typically occur as early as the second trimester of pregnancy. Patients with a history of myomectomy should always be informed of this risk prior to conception, and the mode of delivery should be decided accordingly. Vigilance is key to preventing obstetrical tragedies.

Acknowledgements

We would like to thank the patient for her confidence in our team and to share her case with the scientific community.

Funding

No funding was received to prepare this report.

Patient Consent

We received the patient's written consent to submit her case for publication.

Ethical Approval

Ethical approval is applicable. The case report does not contain any personal information.

Conflicts of Interest

The authors declare that they have no conflict of interest regarding the publication of this case report.

References

- [1] Buttram, V.C. and Reiter, R.C. (1981) Uterine Leiomyomata: Etiology, Symptomatology, and Management. *Fertility and Sterility*, **36**, 433-447.
[https://doi.org/10.1016/S0015-0282\(16\)45789-4](https://doi.org/10.1016/S0015-0282(16)45789-4)
- [2] Gambacorti-Passerini, Z., Gimovsky, A.C., Locatelli, A. and Berghella, V. (2016) Trial of Labor after Myomectomy and Uterine Rupture: A Systematic Review. *Acta Obstetrica et Gynecologica Scandinavica*, **95**, 724-734.
<https://doi.org/10.1111/aogs.12920>
- [3] Smith, J.C., Mertz, H.L. and Merrill, D.C. (2008) Identifying Risk Factors for Uterine Rupture. *Clinics in Perinatology*, **35**, 85-99.
<https://doi.org/10.1016/j.clp.2007.11.008>
- [4] Hagneréa, P., Denouala, I., A. Souissi, B. and Deswarte, S. (2011) Spontaneous uterine Rupture after Myomectomy. Case Report and Review of the Literature. *Journal de Gynecologie Obstétrique et Biologie de la Reproduction*, **40**, 162-165.
<https://doi.org/10.1016/j.jgyn.2010.08.006>
- [5] Claeys, J., Hellendoorn, I., Hamerlynck, T., *et al.* (2014) The Risk of Uterine Rupture

- ture after Myomectomy: A Systematic Review of the Literature and Meta-Analysis. *Gynecological Surgery*, **11**, 197-206. <https://doi.org/10.1007/s10397-014-0842-8>
- [6] Walsh, C.A. and Baxi, L.V. (2007) Rupture of the Primigravid Uterus: A Review of the Literature. *Obstetrical & Gynecological Survey*, **62**, 327-334. <https://doi.org/10.1097/01.ogx.0000261643.11301.56>
- [7] Ahltop, G. (1946) On Conservative Myomectomy. *Acta Obstetrica et Gynecologica Scandinavica*, **26**, 64-78. <https://doi.org/10.3109/00016344609154484>
- [8] Margueritte, F., Adam, C., Fauconnier, A. and Gauthier, T. (2021) Time to Conceive after Myomectomy: Should We Advise a Minimum Time Interval? A Systematic Review. *Reproductive BioMedicine Online*, **43**, 543-552. <https://doi.org/10.1016/j.rbmo.2021.05.016>
- [9] Turner, M.J. (2002) Uterine Rupture. *Best Practice & Research Clinical Obstetrics & Gynaecology*, **16**, 69-79. <https://doi.org/10.1053/beog.2001.0256>