

Silent incomplete Uterine Rupture in an Unscarred Uterus at Term: A Rare Case Possibly Associated with Traditional Abdominal Massage in a Modern Metropolitan Setting

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ABSTRACT

Uterine rupture in an unscarred uterus is an exceptionally rare and potentially catastrophic obstetric event, typically presenting with dramatic maternal and fetal compromise. We report an unusual case of a clinically silent incomplete uterine rupture in a 28-year-old gravida 3 para 1 woman at term, residing in a modern metropolitan city with an established obstetric referral system. The patient had no history of uterine surgery, induction of labor, or trauma, and presented without classical symptoms of uterine rupture. On admission, maternal vital signs were stable and fetal heart rate monitoring was reassuring.

The rupture was discovered incidentally during cesarean delivery planned for prolonged rupture of membranes, fetal growth restriction and Fetal distress. Intraoperative findings revealed a contained serosal–myometrial tear in the lower uterine segment, with localized bleeding and no breach of the uterine cavity, consistent with an incomplete uterine rupture. Notably, the only identifiable potential risk factor was a history of repeated traditional abdominal massage during the third trimester, performed with the intention of improving fetal position.

An emergency cesarean section resulted in the delivery of a live neonate with good Apgar scores, and the mother had an uneventful postoperative recovery. This case highlights the diagnostic challenge of silent uterine rupture in unscarred uteri, underscores the importance of maintaining clinical vigilance even in low-risk pregnancies, and illustrates how potentially harmful traditional practices may persist in urban settings with advanced healthcare access. Greater emphasis on culturally sensitive maternal health education is essential to prevent rare but serious obstetric complications.

Keywords: *Uterine rupture, unscarred uterus, traditional abdominal massage, metropolitan obstetrics, term pregnancy, silent rupture, maternal and fetal outcome*

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INTRODUCTION

Uterine rupture is a life-threatening obstetric emergency traditionally associated with prior uterine surgery, particularly cesarean section scars. Its occurrence in an unscarred uterus is exceptionally rare, with an estimated incidence of 1 in 8,000 to 17,000 deliveries. When it does occur, it is often associated with high maternal and fetal morbidity and mortality due to delayed recognition and rapid clinical deterioration. Classical signs—such as sudden abdominal pain, vaginal bleeding, cessation of contractions, and fetal distress—are usually present, making asymptomatic cases especially difficult to diagnose [1].

In modern metropolitan areas with advanced healthcare systems and efficient referral networks, such events are expected to be recognised and managed promptly. However, cultural practices such as traditional abdominal massage, still common in some communities, may inadvertently increase the risk of uterine rupture, even in the absence of conventional risk factors. These massages are often unregulated, performed by non-medical practitioners, and may apply excessive pressure to the gravid abdomen, leading to unnoticed uterine trauma [1].

We present a rare and instructive case of a incomplete uterine rupture in an unscarred uterus at term, occurring in a woman living in a modern city with a population of 3

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million and no referral barriers. Remarkably, the rupture was clinically silent, the fetus remained alive, and the only identifiable risk factor was traditional abdominal massage. This case underscores the need for vigilance and culturally sensitive education to prevent adverse maternal-fetal outcomes, even in resource-rich settings.

CASE

A 28-year-old gravida 3 para 1 was referred to the Obstetrics and Gynaecology Department of Airlangga University Hospital due to suspected Premature Rupture of membranes and obesity class II WHO Asian classification with complaints of clear amniotic fluid discharge since the previous 24 hours without uterine contractions. Patients with vital signs of blood pressure 130/71 mmHg, heart rate 88x/min and temperature 37. She had a history of traditional abdominal massage 2 times at 33 weeks and 36 weeks of gestation with the excuse of making the fetal position good. The fetus is currently experiencing IUGR with a percentile of 4% and NST category III. The patient was planned for termination of pregnancy by Emergency

Caesarean delivery on consideration of Fetal Distress. The patient underwent a Pfannenstiel incision with sharp incision till Fascia and blunt until Peritoneum, and during the operation, a Uterine tear was found between Round ligament anteriorly of Lower Uterine Segment, 2 fingers from the vesicouterine fold, measuring 3 cm in length a A total of 100 cc of bleeding was found in Abdominal cavity, originating from the tear (Figure 1a). The uterine tear was limited to the myometrium with, resembling an incomplete uterine rupture. Uniquely in this case, the tear extended from the serosa to the myometrium but did not breach the uterine cavity (Figure 1b). During caesarean section was a total blood loss of 300 ml. The baby was born with a head extraction, and there was no amniotic fluid left, with a birth weight of 2400 g with Apgar scores of 8 and 9, according to the 4% percentile of gestational age. Evaluation of the bladder showed no rupture, and abdominal cavity lavage was performed. The patient received postoperative care for 3 days with optimal conditions.

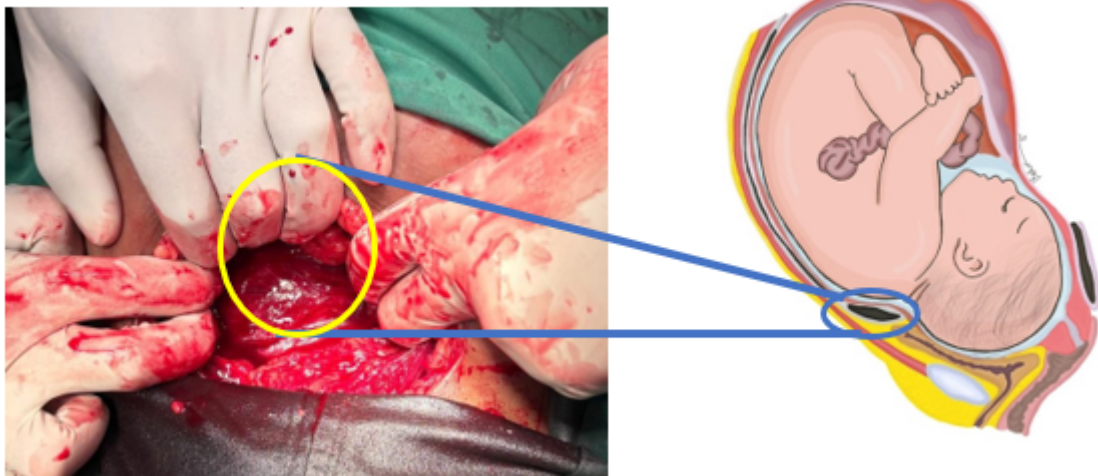


Fig. 1 Incomplete Uterine Rupture

DISCUSSION

Uterine rupture in an unscarred uterus is a rare and often catastrophic event, typically presenting with dramatic clinical signs such as severe abdominal pain, vaginal bleeding, cessation of uterine contractions, or signs of fetal distress[1]. In this case, however, the rupture was entirely silent—there were no alarming symptoms, and the diagnosis was made incidentally during evaluation for reduced fetal movement indicating fetal distress [2]. This atypical presentation highlights the risk of misdiagnosis or delayed recognition, particularly when standard clinical warning signs are absent[3]. Such cases challenge clinicians to maintain a high index of suspicion even in seemingly low-risk pregnancies.

The absence of signs and symptoms in this patient raises important questions about the pathophysiology of so-called “silent” uterine ruptures [4]. One possible

explanation is that the rupture was a gradual, contained process, with the intact amniotic sac preventing abrupt hemodynamic changes or peritoneal irritation. These rare presentations remind clinicians that not all obstetric emergencies follow textbook descriptions, and subtle changes, such as decreased fetal activity, may be the only clue to a life-threatening condition[6].

This case also presents a striking paradox: a severe obstetric complication occurring not in a remote or underserved area, but in a modern metropolitan city with a population of 3 million and an efficient referral system. One would expect that in such an advanced urban setting, high-risk traditional practices would be rare, and maternal outcomes would universally benefit from accessible, evidence-based medical care. Yet, the patient had a history of undergoing traditional abdominal massage in late pregnancy—an unregulated and potentially harmful

practice that remains culturally ingrained even in urban environments. This juxtaposition of modern obstetric infrastructure and persistent traditional beliefs reflects a complex healthcare landscape where access alone does not ensure safety [7].

Remarkably, despite the rupture, the fetus was alive and in good condition at the time of diagnosis. Fetal survival in cases of uterine rupture—particularly in unscarred uteri—is rare, as the condition often results in sudden compromise of uteroplacental circulation [5]. In this case, several factors may have contributed to the favorable outcome, including a contained rupture and an intact amniotic sac that may have preserved fetal oxygenation long enough to allow timely surgical intervention. This underscores the importance of vigilance and rapid response, even when the clinical presentation does not initially appear emergent [7].

Ultimately, this case emphasises the need for culturally sensitive maternal health education that bridges the gap between traditional beliefs and modern medical understanding. In metropolitan areas, where healthcare access is not a primary barrier, efforts must shift toward addressing misinformation and building trust in medical systems. Healthcare providers must be equipped not only with clinical skills but also with communication strategies to engage patients and communities in discussions about the risks of traditional practices—empowering them to make informed choices without dismissing their cultural identity [8].

CONCLUSION: LESSONS LEARNED

This rare case of silent uterine rupture in an unscarred uterus with a living fetus, occurring in a modern metropolitan setting, offers several critical lessons for clinical practice and maternal health policy.

First, uterine rupture can occur without prior uterine surgery or classical symptoms, and may remain undiagnosed until incidental findings prompt further investigation. Clinicians must therefore maintain a high index of suspicion, especially in the presence of subtle indicators such as reduced fetal movement, even in so-called low-risk pregnancies.

Second, the persistence of traditional practices—such as abdominal massage—within urban populations highlights the importance of culturally sensitive education. Access to advanced healthcare does not automatically translate to safe maternal outcomes if harmful practices remain unchallenged or unaddressed. Health systems must go beyond infrastructure and technology, engaging with communities to build trust, dispel myths, and offer respectful, evidence-based alternatives.

Third, this case underscores the possibility of favorable outcomes with timely recognition and intervention, even

in the most unexpected clinical scenarios. The survival of both mother and baby reflects the life-saving potential of integrated care, rapid referral systems, and surgical preparedness.

In conclusion, obstetric care in modern settings must not overlook the nuanced realities of patient behavior, cultural influences, and the unpredictable nature of rare complications. By combining clinical vigilance with culturally competent care, we can better safeguard maternal and fetal health—even in the face of silent threats.

REFERENCES:

1. Togioka BM, Tonismae T. Uterine Rupture. [Updated 2023 Jul 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559209/>
2. James F Smith, Joseph R Wax. Uterine rupture of the unscarred uterus: Risk factors, clinical manifestations, management, and outcome. In: UpToDate. Wolters Kluwer. Available from: <https://www.uptodate.com/contents/uterine-rupture-of-the-unscarred-uterus-risk-factors-clinical-manifestations-management-and-outcome>
3. Harada, Y., Kawamura, R., Yokose, M., Shimizu, T., & Singh, H. (2024). Definitions and Measurements for Atypical Presentations at Risk for Diagnostic Errors in Internal Medicine: Protocol for a Scoping Review. *JMIR research protocols*, *13*, e56933. <https://doi.org/10.2196/56933>
4. Langhe, R., Shah, U. F., Alfathil, A., & Gannon, M. (2017). Silent uterine rupture in scarred uterus. *BMJ case reports*, *2017*, bcr2016218189. <https://doi.org/10.1136/bcr-2016-218189>
5. Mesfin A Tsegaye, Alemayehu N Adugna, Rebecca H Tesfay, Elias GEndegnanew, Kidist N Aragaw. Posterior uterine wall rupture in an unscarred uterus in a term pregnancy; a case report. *Case Reports in Women's Health: Volume 44,2024,e00664,ISSN 2214-9112*. <https://doi.org/10.1016/j.crwh.2024.e00664>.
6. Chen, L., Li, H., Peng, J., Li, M., Wang, Y., Zhao, K., Yang, L., & Zhao, Y. (2024). Silent uterine rupture in the term pregnancy: Three case reports. *Medicine*, *103*(10), e37071. <https://doi.org/10.1097/MD.00000000000037071>
7. Ugboma, H. A., & Akani, C. I. (2004). Abdominal massage: another cause of maternal mortality. *Nigerian journal of medicine : journal of the National Association of Resident Doctors of Nigeria*, *13*(3), 259–262.
8. Aynalem, B. Y., Melesse, M. F., & Bitewa, Y. B. (2023). Cultural Beliefs and Traditional Practices During Pregnancy, Child Birth, and the Postpartum

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Massage in a Modern Metropolitan Setting

Period in East Gojjam Zone, Northwest Ethiopia: A
Qualitative Study. *Women's health reports* (New

Rochelle, N.Y.), 4(1),
<https://doi.org/10.1089/whr.2023.0024>

415–422.