

Labisia pumila as a Culprit of Primary Uterine Rupture Alongside Abruptio Placentae: A Case Report

Luthfi Rahman, Kania Praharsini, Aditiyo Januajie, Ruswana Anwar

Department of Obstetrics and Gynecology, Hasan Sadikin General Hospital-Padjadjaran University, Bandung, Indonesia

Correspondence: Luthfi Rahman, Tel +6282239844701, Email luthfirahmanp@yahoo.com

Purpose: Uterine rupture is a rare obstetrical and surgical emergency but is often associated with a catastrophic obstetric complication. Traditionally, unscarred uteri without risk factors are considered immune to rupture and information about its risk factors is only few due to its rarity. Complementary and alternative medicine is commonly used in pregnant woman in southeast Asian countries such as Indonesia, however information regarding its toxicity due to irrational use is few. This case report presents a G2P1A0 35-year-old woman with acute abdomen with spontaneous unscarred uterine rupture >15 cm after continuously consuming herbal water made of Kacip Fatimah leaves in boiling water.

Case Description: A 35-year-old pregnant woman was referred to hospital due to abdominal discomfort 3 hours before admission due to suspicion of intrauterine fetal death. She drank the extracted herbal water to help her when the labor comes, which was made from boiled water with rumpot Fatimah from her neighbor's house. Then, she was diagnosed with G2P1A0 parturient at term latent phase; acute abdomen due to suspicion of placenta abruption and/rupture uteri; and Intrauterine Fetal Death. Exploratory laparotomy was decided due to acute abdominal pain, and during the procedure the operator decided to do subtotal hysterectomy on the patient. The operator found her uterine was already ruptured, approximately 15–18 cm and the placenta was located outside of the uterus.

Conclusion: This case suggest that rational usage of herbal medicine must be implemented to avoid unwanted complication.

Keywords: case report, herbal medicine, spontaneous uterine rupture, abdominal pain, unscarred uterus

Introduction

Uterine rupture is a rare obstetric emergency but is often associated with a catastrophic obstetric complication with an overall incidence of 1 in 1536 pregnancies.^{1,2} Traditionally, unscarred uteri without risk factors are considered immune to rupture.³ Complementary and alternative medicine (CAM) is commonly used by some pregnant women in some countries due to local beliefs that it is beneficial to facilitate labor.⁴ In the case presented, we present a patient with spontaneous uterine rupture, who regularly had a few glasses of herbal water made from boiled water of Kacip Fatimah (*Labisia pumila*) leaves. The extract may induce continuous abnormal contraction of her uteri.⁵ An irrational use of complementary and alternative medicine could be a global concern due to a popularity increase of CAM usage recently.⁶ This case presents an effect of irrational use of one CAM, one of such is primary spontaneous uterine rupture due to consumption of Kacip Fatimah leaves boiled in water.

Case Report

Chief Complaints

A 35-year-old pregnant woman was admitted due to abdominal discomfort 3 hours before admission.

History of Present Illness

She initially came to the midwife with labor pain that was getting more frequent one day before admission. After an overnight observation, she felt the labor pain getting more frequent and stronger until she felt an abdominal discomfort,

no fetal movement felt, and the fetal heart rate was hard to find by the midwife. Later she was referred to Otto Iskandar Dinata Hospital due to suspicion of intrauterine fetal death. After an in-depth interview, she gained the water from boiled herbal medicine that her neighbor gave, who suggested she drink the extracted herbal water to help her when the labor comes, which is believed to help for better labor progress. She said the water was made from boiled water of rumpun Fatimah from her neighbor. During hospital admission, she complained about abdominal discomfort that felt like a muscle cramp and being torn apart.

Personal History and Family History

Her obstetrical history stated that she was G2P1A0, her last menstruation cycle was on 31 September 2022, and current gestation age was 41 weeks. There was no complication in her previous pregnancy; local delivery taker assisted her labor, and the baby weighed 2600 grams. She was married when she was 21 with her current husband, who was eight years older than her. During her pregnancy, she had routine control with the midwife every month. There was no relevant family history.

Physical Examination

The patient's blood pressure was 80/60 mmHg, heart rate was 128 bpm, respiratory rate was 20 times per minute, body height was 152 cm, body weight was 58 kg, and prior to pregnancy her body weight was 58 kg. The obstetric examination found that her abdomen was stiff and tense, the contraction was hard to access, fetal heart sound was negative, no sign of a ring of bundle, and fundus height was 32 cm. From VT, the membrane was positive, and cervix opening was 3 cm.

Final Diagnosis

Final diagnosis of this case was G2P1A0 parturient at term latent phase; acute abdomen due to suspicion of placenta abruptio dd/ ruptur uteri; and Intrauterine Fetal Death.

Treatment

Exploratory laparotomy was decided due to the acute abdominal pain state. During the procedure, there were no signs of life from the baby, the baby was female, her weight was 2350 grams, and her length was 44 cm. The operator also found that placenta was located outside and her uterus was already ruptured, approximately 15–18 cm (Figure 1). The operator decided to do subtotal hysterectomy on the patient due to the remote setting and a blood transfusion was not available, so it is risky to perform hysterorrhaphy.

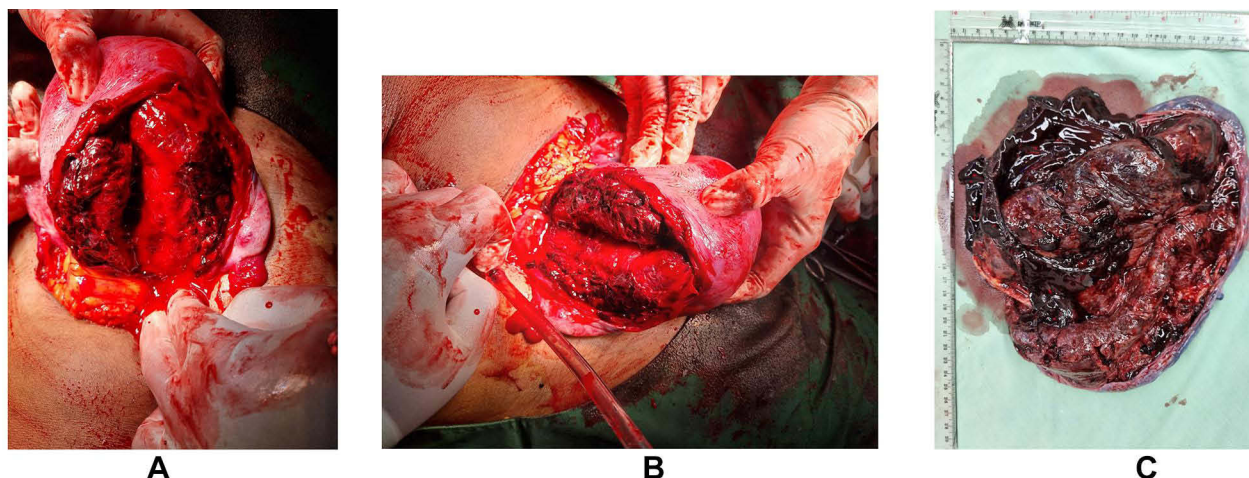


Figure 1 Uterine rupture: (a) intra-operative image of uterine rupture of the anterior side; (b) intra-operative image of uterine rupture from the lateral side; (c) gross specimen of primary uterine rupture after supravaginal hysterectomy.

Outcome and Follow-Up

The baby could not be saved due to stillbirth. Her final diagnosis was spontaneous uterine rupture >15 cm in P2A0 post-term; stillbirth. Later she was hospitalized for few days, and then her condition getting better. The patient was sad about the birth result, but thankful to the doctor because the team were able to rescue her. She said she will become more careful about what she consumes, especially traditional medicine.

Discussion

Traditionally, unscarred uteri without risk factors are considered immune to rupture.³ In the case presented, there is no history of uterine trauma or another risk factor of uterine ruptures or other risk factors for primary uterine rupture such as a contracted pelvis, fetal macrosomia, contracted pelvis associated with macrosomia, malpresentation, and dystocia associated with oxytocin and traditional medicine labor augmentation.^{5,7} However, after further history taking from the patient, she said she regularly drank a herbal water made from boiled water of *Labisia pumila* (LP) leaves, also known as rumput Fatimah.

Labisia pumila is a traditional herb commonly used as post-partum medication and was known to facilitate childbirth.⁸ LP is one complementary and alternative medicine (CAM) commonly used by pregnant women in some countries such as Indonesia and Malaysia, due to local beliefs that it is beneficial to facilitate labor.⁴ Most women use CAM based on information from the Internet or their family as main sources.^{6,9} They believe CAM posed no danger to them or their unborn children.^{6,9} Additionally, having the freedom to choose a CAM treatment without requiring authorization from their healthcare practitioner empowered them to have greater control over their own health and body. Hence, pregnant women may infer that CAM are efficacious and secure alternatives to ease their complaint.⁹ Healthcare providers must participate in CAM usage, they could start by asking of any alternative supplementation that was used by the patient, and educate them regarding the normal use.⁶

Previous study found LP extract is beneficial in treating female reproductive diseases such as postmenopausal and polycystic ovarian syndrome.¹⁰ This plant is rich in phytoestrogen and is commonly utilized for augmenting vitality, improving energy levels, alleviating dysmenorrhoea, and strengthening the perineal muscles.¹¹ Pregnant women are commonly administered a water decoction made from the roots or entire plant of *Labisia pumila*, typically one to two months prior to delivery, meanwhile in Indonesia they usually use their leaves. This practice is considered to stimulate and hasten the process of childbirth.¹² However, Yusof et al found another result, that there is strong association between the usage of Kacip Fatimah during pregnancy and premature labor, with a prevalence rate of 28.6%.⁴ This could be attributed to the phytoestrogen concentration in Kacip Fatimah that can enhance myometrial activation with improved receptivity by modulating membrane receptors and gap junctions.⁴

The *Labisia pumila* effect in the human body is dose-dependent.¹³ The dose-dependent effect is of great concern to users because it is closely related to the safety issue for long-term consumption of *L. pumila*.¹³ Some studies suggest LP extracts may induce estrogenic activity and contain compounds with binding affinities for estrogen receptors $ER\alpha$ and $ER\beta$.⁸ $ER\alpha$ was present in both myometrial and endometrial compartments of the uterus. At the same time, $ER\beta$ was isolated solely to the endometrial compartment.¹⁴ Thus, the uterotonic action of E2 in the human myometrium is thought to be mediated by $ER\alpha$ signalling. As circulating E2 levels rise toward term and de-repression of $ER\alpha66/ER\alpha46$ isoforms, specifically in the myometrium, promote enhanced uterotonic action of E2 at term and the onset of labor.¹⁴ The patient admitted that she drank LP extract waters prior to admission; due to irrational LP extract consumption, E2 levels may rise and then induce the contractions that act like a birth induction treatment in this patient. Sequential labor induction was believed a major risk factor of uterine rupture.² Induction of labor at 41^{3/7} or 41^{5/7} weeks increases the risk of uterine rupture.¹⁵

Based on the patient story, her uterus might continuously be stimulated since a few weeks prior to admission due to the herbal water consumption, thus causing placental abruption (PA). Placental abruption may contribute to uterine rupture and peripartum hysterectomy in this patient.¹¹ The management of PA is still challenging, even for the most experienced obstetricians. One of the most essential matters in this case is time. A prolonged decision-to-delivery interval increases perinatal morbidity and mortality.¹⁶ Currently no guideline could be used as an outline of the PA risk group,

however there were some attempts to discover placental abruption markers at 1st or 2nd trimester. A mother who has PAPP-A protein <5th percentile, AFP >95th percentile, and inhibin-A <5th percentile or >95th percentile was at higher risk for developing PA.¹⁷ Early pregnancy serum metabolomic profiles connected with abnormal vaginal bleeding may serve as predictors of PA.¹⁸ Daily antepartum low-molecular-weight heparin injections seemed to reduce the risk of PA, although the data were inconsistent.¹⁹

Conclusion

Uterine rupture is a rare obstetric and surgical emergency but is often associated with a catastrophic obstetric complication. Uterine rupture might happen due to hyperstimulation, which in this case is due to consumption of herbal water. Rational usage of herbal medicine must be implemented to avoid unwanted complication; hence healthcare providers must participate regarding this issue.

Ethics

The patient and her family allowed her case to be presented and submitted, and written consent was obtained. Institutional Review Board was not required for the publication of this case report.

Acknowledgments

We would like to acknowledge our patient for consenting to the publication of this case report and express gratitude to our colleagues in Obstetric and Gynecology Department of Otto Iskandar Hospital for their help during the case treatment.

Disclosure

The authors declare there is no conflict of interest in this work.

References

1. Augustin G. Spontaneous Uterine Rupture. In: Augustin G, editor. *Acute Abdomen During Pregnancy*. Cham: Springer International Publishing; 2018:621–662. doi:10.1007/978-3-319-72995-4_16
2. Al-Zirqi I, Daltveit AK, Forsén L, Stray-Pedersen B, Vangen S. Risk factors for complete uterine rupture. *Am J Obstet Gynecol*. 2017;216(2):165.e1–165.e8. doi:10.1016/j.ajog.2016.10.017
3. Uccella S, Cromi A, Bogani G, Zaffaroni E, Ghezzi F. Spontaneous prelabor uterine rupture in a primigravida: a case report and review of the literature. *Am J Obstet Gynecol*. 2011;205(5):e6–8. doi:10.1016/j.ajog.2011.08.013
4. Yusof J, Mahdy ZA, Noor RM. Use of complementary and alternative medicine in pregnancy and its impact on obstetric outcome. *Complement Ther Clin Pract*. 2016;25:155–163. doi:10.1016/j.ctcp.2016.09.005
5. Egbe TO, Halle-Ekane GE, Tchente CN, Nyemb JE, Belley-Priso E. Management of uterine rupture: a case report and review of the literature. *BMC Res Notes*. 2016;9(1):1–5. doi:10.1186/s13104-016-2295-9
6. Alqathama A, Alhomoud F, Alsadiq Y, et al. Complementary and alternative medicine from the perspective of pregnant and lactating women. *Eur J Integr Med*. 2023;58:102217. doi:10.1016/j.eujim.2022.102217
7. Tegute I, Traore Y, Sissoko A, et al. Determining factors of cesarean delivery trends in developing countries: lessons from point G National Hospital (Bamako-Mali). *INTECH Open Access*. 2012;2012:161–202.
8. Turck D, Bohn T, Castenmiller J, et al. Safety of an aqueous ethanolic extract of *Labisia pumila* as a novel food pursuant to Regulation (EU) 2015/2283; 2022;.
9. Watanabe A, Inoue S, Okatsu A, Eto H, Oguro M, Kataoka Y. Complementary and alternative medicine use by pregnant women in Japan: a pilot survey. *BMC Complement Med Ther*. 2023;23(1):298. doi:10.1186/s12906-023-04126-1
10. Zakaria AA, Noor MHM, Ahmad H, Hassim HA, Mazlan M, Ab Latip MQ. A review on therapeutic effects of *Labisia pumila* on female reproductive diseases. *Biomed Res Int*. 2021;2021:1–9. doi:10.1155/2021/9928199
11. Ali Z, Khan IA. Alkyl phenols and saponins from the roots of *Labisia pumila* (Kacip Fatimah). *Phytochemistry*. 2011;72(16):2075–2080. doi:10.1016/j.phytochem.2011.06.014
12. Jamal JA, Houghton JP, Milligan RS, Jantan I. The estrogenic and cytotoxic effects of the extracts of *Labisia pumila* and *Labisia pumila* var *pumila* in vitro. *J Sains Kesehat Malaysia*. 2003;2003:53–60.
13. Chua LS, Lee SY, Abdullah N, Sarmidi MR. Review on *Labisia pumila* (Kacip Fatimah): bioactive phytochemicals and skin collagen synthesis promoting herb. *Fitoterapia*. 2012;83(8):1322–1335. doi:10.1016/j.fitote.2012.04.002
14. Anamthathmakula P, Kyathanahalli C, Ingles J, Hassan SS, Condon JC, Jeyasuria P. Estrogen receptor alpha isoform ERdelta7 in myometrium modulates uterine quiescence during pregnancy. *EBioMedicine*. 2019;39:520–530. doi:10.1016/j.ebiom.2018.11.038
15. Rydahl E, Declercq E, Juhl M, Maimburg RD. Routine induction in late-term pregnancies: follow-up of a Danish induction of labour paradigm. *BMJ Open*. 2019;9(12):e032815. doi:10.1136/bmjopen-2019-032815

16. Ayeni OM, Aboyaji AP, Ijaiya MA, Adesina KT, Fawole AA, Adeniran AS. Determinants of the decision-to-delivery interval and the effect on perinatal outcome after emergency caesarean delivery: a cross-sectional study. *Malawi Med J.* 2021;33(1):28–36. doi:10.4314/mmj.v33i1.5
17. Ananth CV, Wapner RJ, Ananth S, D'Alton ME, Vintzileos AM. First-trimester and second-trimester maternal serum biomarkers as predictors of placental abruption. *Obstet Gynecol.* 2017;129(3):465. doi:10.1097/AOG.0000000000001889
18. Gelaye B, Sumner SJ, McRitchie S, et al. Maternal early pregnancy serum metabolomics profile and abnormal vaginal bleeding as predictors of placental abruption: a prospective study. *PLoS One.* 2016;11(6):e0156755. doi:10.1371/journal.pone.0156755
19. Rodger MA, Gris JC, De Vries JJP, et al. Low-molecular-weight heparin and recurrent placenta-mediated pregnancy complications: a meta-analysis of individual patient data from randomised controlled trials. *Lancet.* 2016;388(10060):2629–2641. doi:10.1016/S0140-6736(16)31139-4

International Medical Case Reports Journal

Dovepress

Publish your work in this journal

The International Medical Case Reports Journal is an international, peer-reviewed open-access journal publishing original case reports from all medical specialties. Previously unpublished medical posters are also accepted relating to any area of clinical or preclinical science. Submissions should not normally exceed 2,000 words or 4 published pages including figures, diagrams and references. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/international-medical-case-reports-journal-journal>