

# A Rare Case of Uterine Rupture Diagnosed In The Late Postpartum Period

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## ABSTRACT

Obstetric hemorrhages are still the most common cause of maternal mortality worldwide (1). Uterine rupture, which could be included among the causes of postpartum bleeding, results in serious mortality and morbidity. Although scarless uterine rupture is extremely rare, it might be seen with an approximate frequency of 1/5700 - 1/20000 in pregnancies (2-5). In general, it is diagnosed and treated in the early postpartum period as it usually presents symptoms at this very stage. A case of uterine rupture that was diagnosed and treated on the 28<sup>th</sup> postpartum day was discussed in this case.

**Key Words:** Uterine rupture, late period, postpartum hemorrhage

## Case Report

Our patient was 27 years old, gravida 2, parity 2 (normal vaginal delivery), and there was no history of abortion, curettage, chronic disease or previous operation. The patient had a normal vaginal delivery in 2018 and admitted to the hospital in 2019, in the 39<sup>th</sup> week of her second pregnancy, due to labor pain. Cervical dilatation was determined as 4-5 cm in vaginal examination and effacement was 60%, these findings indicated her active labor and therefore she was admitted to the hospital. 1% oxytocin solution at the rate of 12/min drops was used and a live baby girl was delivered by normal vaginal route without any problem 5 hours after hospitalization. The patient was discharged from hospital on the 1<sup>st</sup> day of postpartum as she had normal hemogram values and vitals. The patient was applied to the emergency service as her bleeding from the abundant suddenly started on the 28<sup>th</sup> day of postpartum, she was curetted as vaginal ultrasonography indicated possibility of rest placenta and she was transferred to our clinic due to continuing bleeding after 1g of tranexamic acid application and placement of bacri balloon within the uterine cavity. In the performed ultrasonography the bacri balloon was seen in the uterine cavity and a 7 cm hematoma was observed in the right side of the uterus. Pelvic MRI was

performed due to suspicion of arterio venous malformation (AVM), and there was no appearance compatible with AVM in pelvic MRI. After the removal of the Bakri balloon, the patient's bleeding started again and thus diagnostic laparotomy was performed. In laparotomy, a full thickness rupture area of approximately 5-6 cm along the right lateral wall of the uterus and a perforation area of approximately 0.5 cm in the fundus of the uterus were observed. After the repair of rupture and perforation area a drain was placed in the abdomen and the operation was terminated.

## Discussion

Postpartum hemorrhage might also be classified as primary and secondary (6). While those occurring in the first 24 hours of postpartum are classified as primary, the bleedings those are occurring after 24 hours of postpartum to 12<sup>th</sup> week is classified as secondary (7). The primary causes are postpartum atonia and genital trauma and secondary causes include rest placenta, infection, and arteriovenous malformations (6).

Scarless uterine rupture can be caused by trauma or congenital diseases that impair the myometrium. Motor vehicle accidents and obstetric maneuvers (eg internal or external

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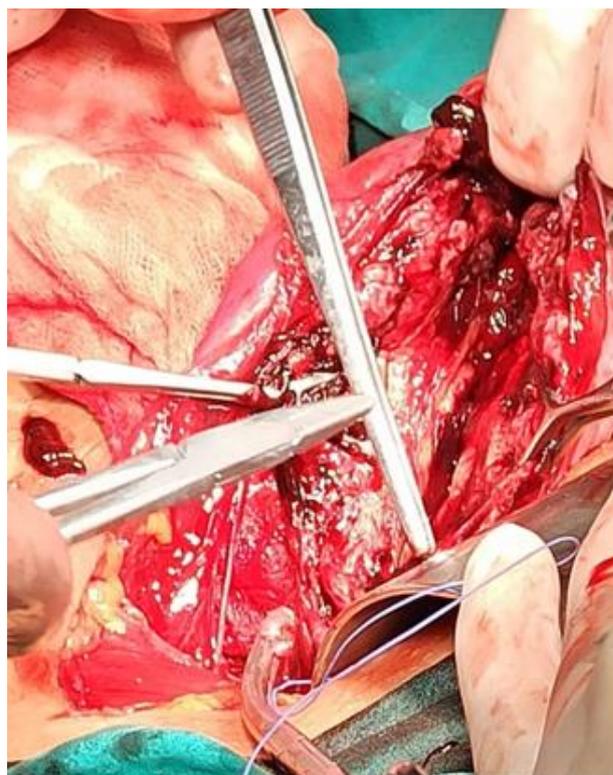
Received: 18.09.2020, Accepted: 15.12.2020



**Fig. 1.** Right Parametrium Rupture Area

cephalic version) can be considered as trauma sources. Myometrium may be weakened by a congenital disorder such as Ehlers-Danlos type IV, prolonged labor and use of uterotonic drugs (8-13). High parity, uterine anomalies, late maternal age, dystocia, macrosomia, multiple pregnancy, abnormal placenta (e.g. placenta accreta, increta, or percreta), short conception interval, and cerclage history (14-17) can be counted as risk factors for the rupture of scarless uterus. In this case, the use of uterotonic agents and pregnancy in less than 2 year time interval are considered as risk factors. Hypotension, tachycardia, and abdominal pain may be observed depending on fetal heart rate changes, rupture size and abdominal bleeding amount (14). Uterine sensitiveness, changes in the shape of the uterus, and cessation of contractions may be seen depending on the rupture (18-20). Vaginal bleeding may not be seen even though the presence of abdominal bleeding within the abdomen, vaginal bleeding is generally seen in the cases when the lacerated cervix and vaginal walls are accompanied as well. Hematuria may accompany when the bladder involves.

A definite diagnosis can be made during laparotomy performed because of suspecting fetal distress or hemodynamic instability of the mother in intrapartum ruptures and vaginal bleeding or hemodynamic instability of the mother in postpartum ruptures. Therefore, a high level of suspicion is required to be able to make a diagnosis. The structure of the uterus and bleeding into the abdomen can be evaluated with transvaginal ultrasound in the postpartum suspected cases (15). Although more than 90% of the cases occur in the anterior wall in the lower uterine segment, it may also occur in the corpus, cervix, vaginal walls, uterine interface, and parametrium (18).



**Fig. 2.** 7 cm Rupture Area Extending Into The Vagina

Uterine ruptures have a serious mortality and morbidity depending on the location of the rupture, its size, the time of diagnosis and intervention (21-23). Therefore, it is usually necessary to diagnose and treat uterine ruptures in the early period. In this case, the rupture area was observed widely in laparotomy, however it is thought that the existing rupture might be expanded due to the application of bacri balloon. Since there are no large vessels in the rupture area, it is thought that there were no findings in the early period. As can be seen in this case, uterine rupture should be considered in patients who apply to the clinics with bleeding in the late postpartum period and have signs of bleeding on ultrasound.

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