

# Spontaneous Uterine Rupture During Pregnancy: Does Previous Uterine Septum Resection Trigger It?

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Even though uterine rupture during pregnancy following a hysteroscopic septum resection is a very infrequent complication, patients contemplating pregnancy after this procedure complicated by perforation should be aware of potential risk of uterine rupture.

**Key Words:** Uterine rupture, Pregnancy, Septum resection

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## Introduction

Uterine septum is the most common müllerian abnormality in infertile patients.<sup>1</sup> Cutting the uterine septum via operative hysteroscopy is the primary treatment modality. However, in women who later become pregnant, complications secondary to the uterine septum resection may arise. Uterine rupture on subsequent pregnancies after hysteroscopic septum resection is a rare condition and it is particularly associated with septum resections in which uterine perforation is encountered.<sup>2</sup> Uterine rupture during pregnancy is usually associated with severe maternal and fetal problems if it is not diagnosed early and/or managed immediately.<sup>1</sup>

In this manuscript, we reported a patient who had underwent hysteroscopic resection for a uterine septum and experienced spontaneous uterine rupture in her subsequent pregnancy.

## Case Report

A 36 year old, gravida 1 para 0, 27 weeks pregnant woman suffering from abdominal pain and vomiting attended to our emergency service. We noted from her hospital records that she had been referred to our infertility unit 2 years ago. We also noted that she had undergone operative hysteroscopy for uterine septum. In that hysteroscopy, uterine septum had been resected via electrosurgery. 3 months later, retained uterine septum had been diagnosed and total resection of uterine septum had been performed again. During the last procedure, fundal uterine perforation of 1.0 cm in diameter had been oc-

curred. Immediate diagnostic laparoscopy had revealed a perforation of 1cm in diameter on the fundus with no bleeding. No more treatment had been performed. After 6 months the patient had conceived with intracytoplasmic sperm injection and embryo transfer.

Her vital signs were normal in the emergency unit (Blood pressure=130/65 mm/Hg and pulse rates=84 per minute). Physical examination was all normal except a tenderness and defense on whole abdomen. Total blood count revealed that hemoglobin was 9.3gr/dL, hematocrit was 25.7% and white blood count was 15500/uL. Blood biochemistry was normal.

Pelvic ultrasonography revealed free intraperitoneal pelvic fluid and normal intrauterine pregnancy with normal fetal cardiac activity and fetal biometry. Fetal status was assessed by fetal cardiotocography and it was normal. During surveillance, acute fetal bradycardia was noticed. Ultrasonographic examination showed an amniotic protrusion throughout of uterus on fundus. Emergent laparotomy was performed. A dehiscence with 6 cm in length on uterine fundus and 500 ml of free blood in pelvis was noted in the laparotomy. The placenta was completely exteriorized from the uterus. A female, 980 gram infant was delivered through a low transverse incision. The APGAR scores were 6 and 8 at 1<sup>st</sup> and 5<sup>th</sup> minutes, respectively. Umbilical arterial pH was 7.21 and fetal hemoglobin and hematocrit was not affected. Low transverse incision was sutured with 1/0 Vicryl as two layers and dehiscence on fundus was repaired with 1/0 Vicryl as three layers without any complication. The estimated blood loss was 2 liters. After the operation the patient necessitated replacement of 2 unites red blood cells. Patient was discharged uneventfully on day 6. Surfactant therapy was administered for the newborn and she was discharged on day 51 uneventfully.

## Discussion

Halvorson et al.<sup>2</sup> documented the first case of spontaneous uterine rupture during pregnancy following hysteroscopic

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metroplasty complicated by uterine perforation.

Sentilhes et al.<sup>3</sup> later reviewed 14 cases of uterine rupture following operative hysteroscopy and they concluded that some risk factors are associated with subsequent uterine rupture. The most common indication for operative hysteroscopy was uterine septa. On 9 (64%) of cases current monopolar section was performed for resection. Uterine perforation occurred in 8 (57%) of cases during procedure and did not on the remaining. Uterine rupture occurred between 19 and 41 weeks of gestation and 9 (64%) of cases, uterine rupture occurred without labor. Four fetal and one maternal deaths followed uterine rupture.

Prediction of the uterine rupture during pregnancy by serial ultrasonography during pregnancy is failed. After the procedure follow-up hysterosalpingogram has also no predictive effect for uterine rupture during pregnancy.

The interval between hysteroscopy and the subsequent pregnancy <24 months was associated with a two-three fold increased risk of uterine rupture.<sup>3</sup>

Even though uterine rupture during pregnancy following a hysteroscopic septum resection is a very infrequent complication few cases have been described. Patients contemplating pregnancy after this procedure complicated by perforation should be aware of potential risk of uterine rupture. Unfortunately, effective method of monitoring the uterus is still unknown.<sup>1</sup>

## **Gebelikte Kendiliğinden Uterin Rüptür: Uterin Septum Rezeksiyon Hikayesi Tetiklemiş Olabilir mi?**

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Histeroskopik septum rezeksiyonu sonrası oluşan gebeliklerde spontan uterin rüptür şansı çok düşük olmasına rağmen bu hastaların uterin rüptüre maruz kalabilecekleri akılda tutulmalı ve bu şekilde takip edilmelidirler.

**Anahtar Kelimeler:** Uterin rüptür, Gebelik, Septum rezeksiyonu

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